



**City of St. Helena  
Planning Commission  
Regular Meeting  
Tuesday, March 7, 2017 @ 6:00 PM  
Vintage Hall Board Room - Second Floor  
465 Main Street, St. Helena**

**PLEASE NOTE:** Any person who wishes to speak regarding an item on the agenda or make a comment under the "Oral Communication" portion of the agenda may do so, but please observe the time limit of three minutes.

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Page

1. PLEDGE OF ALLEGIANCE
2. CALL TO ORDER AND ROLL CALL  
Chairperson: Grace Kistner  
Vice Chair: Vacant  
Commissioners: Sarah Parker, Bobbi Monnette, Tracy Sweeney  
City staff present at the meeting will be noted in the minutes.
3. PUBLIC FORUM:  
This is an opportunity for the public to address the Commission on items of interest to the public that are NOT listed on the agenda. Because of restrictions imposed by the Brown Act, the Commission may not engage in discussion nor take action on matters not described on the agenda. **Please observe the time limit of three minutes.**
4. CONSENT ITEMS  
Members of the Commission or the public may ask that any items be considered individually for purposes of considering alternative action, for extended discussion, or for public comment. Unless that is done, one motion may be used to adopt all recommended actions. (Roll Call Vote)
  - 4.1. Approval of regular meeting minutes: 7 - 16  
[COMMISSION MINUTES 2-7-17](#)  
[COMMISSION MINUTES 2-21-17](#)
  - 4.2. **FILE NUMBER:** PL17-002 17 - 38  
**LOCATION OF PROPERTY:** 1017 N. Crane Avenue  
**PROJECT DESCRIPTION:** Temple Accessory Shed Design Review Exemption

**CEQA Determination:** The project is exempt from the requirements of CEQA pursuant to Section 15303

**Prepared By:** Lilly Bianco, Contract Planner

**Recommendation:** Staff recommends that the Planning Commission adopt a resolution finding that:

1. The project is exempt from the requirements of CEQA pursuant to CEQA Section 15303 as the construction of an accessory structure.
2. Accepts the required findings and approves the design review exemption for the Temple Shed at 1017 N. Crane Avenue.



[1017 N Crane Staff Report](#)  
[Attachment 1- Resolution](#)  
[Attachment 2 - APN MAP](#)  
[Attachment 3 - Aerial View](#)  
[Attachment 4 - Project Plans](#)  
[Attachment 5 - Project Narrative](#)

- 4.3. **FILE NUMBER:** PL16-096  
**LOCATION OF PROPERTY:** 800 Crane Avenue, St.Helena, CA 94574  
**PROJECT DESCRIPTION:** Design Review Exemption for Harold Smith & Sons Concrete Reclaimer Replacement

39 - 68

**CEQA Determination:** The project is categorically exempt in accordance with CEQA Section 15302

**Prepared By:** Noah Housh, Planning Director

**Recommendation:** The Planning and Community Improvement Department recommends that the Planning Commission:

1. Determine that the project is categorically exempt from the requirements of CEQA pursuant to CEQA Section 15302 "Replacement or Reconstruction" as the replacement of a commercial structure with a new structure of substantially the same size, purpose, and capacity.
2. Accept the required findings enumerated in Municipal Code Section 17.164.030 and adopt a resolution approving a Design Review Exemption for the proposed Harold Smith and Sons Concrete Reclaimer Replacement project.

[800 Crane Staff Report](#)  
[Attachment 1 - Resolution](#)  
[Attachment 2 - APN Map](#)  
[Attachment 3 - Aerial with Location](#)  
[Attachment 4 - Project Narrative](#)  
[Attachment 5 - Project Plans](#)

## 5. PUBLIC HEARINGS

- 5.1. **FILE NUMBER:** PL17-005  
**LOCATION OF PROPERTY:** 1380 Main Street, Suite #103  
**PROJECT DESCRIPTION:** Request by Shannon Coombs for a use permit in order to establish a clothing and fashion accessories boutique in a new tenant space located in the Menegon Building at 1380 Main Street in the CB: Central Business district.

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**CEQA Determination:** Staff finds that the project is exempt from the requirements of CEQA pursuant to Section 15301, Class 1

**Prepared By:** Aaron Hecock, Senior Planner

**Recommendation:** Staff recommends that the Planning Commission:

1. Determine that the project is exempt from the requirements of CEQA pursuant to Section 15301, Class 1, which exempts the operation, leasing, or minor alteration of existing facilities; and
2. Accept the required findings and approve a Use Permit for a new clothing store at 1380 Main Street Suite #103.

[1380 Staff Report](#)  
[Attachment 1 - Resolution](#)

[Attachment 2 - Statement](#)

[Attachment 3 - Floor Plan](#)

5.2.

- ***This item was continued from the February 21, 2017 Planning Commission Meeting***

83 - 1793

**FILE NUMBER:** PL16-042/PL16-043

**LOCATION OF PROPERTY:** 830 Pratt; 2555 Main Street

**PROJECT DESCRIPTION:** Applicant is proposing a campus master plan to restructure and expand the educational facilities at the Greystone Campus (2555 Main Street) and expand student enrollment from 200 to 300 students. Also proposed is a 4,468 sf underground storage cave and the installation of three modular storage units at the rear of the building. Concurrently, student housing facilities (dormitories) at the Vineyard Lodge Housing Site (830 Pratt Avenue) will be expanded by 123 net new dorm rooms to accommodate a total of 224 residents. The applicant is requesting the following entitlements: Design Review, Use Permit(s), Demolition Permit, and Variance(s).

**CEQA Determination:** In accordance with the California Environmental Quality Act (CEQA) Guidelines, an Initial Study and Mitigated Negative Declaration (IS/MND) has been prepared for the proposed project.

**Prepared By:** Lilly Bianco, Contract Planner

**Recommendation:** The Planning and Community Improvement Department recommends that

1. Adopt the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program for the project; and
2. Accept the required findings enumerated in Municipal Code Section 17.164.030 and adopt a resolution approving Design Review and a Use Permit for the CIA at Greystone project at 2555 Main Street.
3. Adopt a resolution approving a Demolition Permit, Design Review, a Use Permit, and Variance(s) for the Vineyard Lodge Housing component of the Campus Master Plan at 830 Pratt Avenue.

[0. 2555 Main and 830 Pratt Staff Report March 7](#)

[1. 2555 Main and 830 Pratt ATTCH 1. Resolution](#)

[2. 2555 Main and 830 Pratt ATTCH 2. Public Comments Rec. After 5pm Feb 21](#)

[3. 2555 Main and 830 Pratt ATTCH 3. Supplemental information from Applicant](#)

[4. 2555 Main Staff Report Feb 21](#)

[5. 2555 Main ATTCH 1 Resolution- 2555 Main and 830 Pratt--](#)

[6. 2555 Main ATTCH 2 Legislative History- 2555 Main](#)

[7. 2555 Main ATTCH 3 APN MAP -2555 Main St](#)

[8. 2555 Main ATTCH 4 Aerial View- 2555 Main](#)

[9. 2555 Main ATTCH 5 Project Narrative- 2555 Main](#)

[10. 2555 Main ATTCH 6 Project Plans, 2.13.17](#)

[11. 2555 Main and 830 Pratt Avenue ATTCH 7 ISMND and MMRP \(1\)](#)

[12. 2555 Main and 830 Pratt Response to Comments](#)

[13. 2555 Main ATTCH 9 Public Comments](#)

[14. 830 Pratt Staff Report Feb 21](#)

[15. 830 Pratt Public Comments - Copy](#)

[16. 830 Pratt Response to Comments - Copy](#)

[17. 830 Pratt ATTCH 1 Resolution- 2555 Main and 830 Pratt](#)  
[18. 830 Pratt ATTCH 2. Legislative History-830 Pratt](#)  
[19. 830 Pratt ATTCH 3. APN Map - 830 Pratt](#)  
[20. 830 Pratt ATTCH 4. Aerial View](#)  
[21. 830 Pratt ATTCH 5. Project Narratives- 830 Pratt](#)  
[22. 830 Pratt ATTCH 6. Parking Memo, Feb 2017 \(1\)](#)  
[23. 830 Pratt ATTCH 7. Project Plans](#)  
[24. ATTCH 7.5.A. CIA BASMAA 6-21-2016](#)  
[25. ATTCH 7.5.B. Culinary Institute of America 830 Pratt Greenhouse Gas Evaluation](#)  
[26. ATTCH 7.5.C. Culinary Institute of America Greystone Rehabilitation GHG Evaluation](#)  
[27. ATTCH 7.5.D. Drainage and Hydrology Analysis](#)  
[28. ATTCH 7.5.E. Geotechnical Study for Greystone](#)  
[29. ATTCH 7.5.F. Geotechnical Study-830 Pratt](#)  
[30. ATTCH 7.5.G. Greystone Plan Set](#)  
[31. ATTCH 7.5.H. Greystone Wastewater Feasibility Study 06-15-2016](#)  
[32. ATTCH 7.5.I. MWELO](#)  
[33. ATTCH 7.5.J.Phase I ESA- 830 Pratt](#)  
[34. ATTCH 7.5.K. Pratt Avenue Plan Set](#)  
[35. ATTCH 7.5.L. CIA Pratt Noise Study 6-15-16](#)  
[36.ATTCH 7.5.M. Roundabout Analysis](#)  
[37.ATTCH 7.5.N. SOIS Compliance](#)  
[38.ATTCH 7.5.O. Stormwater Control Plan](#)  
[39.ATTCH 7.5.P.Traffic Impact Study- Greystone](#)  
[40.ATTCH 7.5.Q. Traffic Impact Study- Vineyard Lodge \(830 Pratt\)](#)  
[41.ATTCH 7.5.R. Tree Protection Guidelines](#)  
[42.ATTCH 7.5.S. VL 2 HYDRAULIC CALCULATIONS](#)  
[43.ATTCH 7.5.T. VL2 Wastewater Feasibility Study](#)  
[44.ATTCH 7.5.U.Visual Impact Assessment](#)  
[45.ATTCH 7.5.V. Water Availability Analysis](#)  
[46. 2555 Main and 830 Pratt - Additional Public Comments](#)  
[47. Staff Presentation - Lilly Bianco](#)  
[48. Applicant Presentation](#)

6. SCHEDULED MATTERS

6.1. None

7. DEPARTMENT REPORTS

This is an opportunity for staff to report on or update the Commission on any relevant matters.

- 7.1. Administrative Determination that discretionary Design Review approval to re-develop the property at 2600 Sulphur Springs Road will not require dedication of 30-feet of right-of-way to the City of St Helena for future public street improvements. 1795 - 1796  
[2600 Sulphur Springs - Admin Determination](#)

8. AGENDA FORCAST

Attached is a summary document of pending projects and up coming and items of priority and interest that will be placed on future agendas. This is also an opportunity for the Commission as a whole to request items be placed on

future agendas for discussion. These items should be consistent with, and work to implement adopted Council Goals.

9. ADJOURNMENT

The next Regular Planning Commission meeting is scheduled for March 21, 2017, at 6:00 p.m. in the Vintage Hall Board Room located at 465 Main Street.

This agenda was posted at City Hall, 1480 Main Street, and at Vintage Hall, 465 Main Street, St. Helena, California on March 2, 2017.

A handwritten signature in black ink, appearing to read "Noah Housh".

Noah Housh, Planning Director

**Appeal.** A person who is dissatisfied with a decision of the Planning Commission may appeal that decision to the City Council pursuant to Municipal Code Section 17.08.180, Appeal procedure. Actions of the Planning Commission will be listed on the City Council agenda the following Tuesday to give the City Council opportunity to review the Planning Commission's decision. Absent of an appeal by the City Council or by a citizen, the appeal period will terminate two weeks after the Planning Commission hearing.

**Special Assistance for the Disabled.** In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please call the City Clerk's Office (707) 967-2792. Notification 48 hours prior to the meeting will enable City to make reasonable arrangements to ensure accessibility to this meeting (28 CFR35.102-35.104 ADA Title II). However, City staff will attempt to assist at any time with accessibility. The City Clerk has equipment to assist those with a hearing impairment.

#### PUBLIC TESTIMONY PROCEDURES

Pursuant to the Government Code Section 54954.3, the public may address the Commission on each agenda item during the Commission's consideration of that item. Each speaker has the option to state his or her name for the record before testifying. Depending on the number of speakers or the interest of the item, the Planning Commission Chairman may also restrict, at his/her discretion, the speaker's time to three minutes. The

Chairman may also restrict public comments if they become irrelevant to the agenda item or repetitious of prior comments. All persons interested may appear and be heard or submit written statements prior to the Planning Commission meeting. Please note that if you challenge the City's decision on any of these matters in court, you may be limited to raising only those issues you or someone else raised at the meeting or in written correspondence delivered to the City at, or prior to, the meeting.

#### CHALLENGING DECISIONS OF CITY ENTITIES

The time limit within which to commence any lawsuit or legal challenge to any quasi-adjudicative decision made by the City of St. Helena is governed by Section 1094.6 of the Code of Civil Procedure, unless a shorter limitation

period is specified by any other provision, including without limitation Government Code section 65009 applicable to many land use and zoning decisions, Government Code section 66499.37 applicable to the Subdivision Map Act, and Public Resources Code section 21167 applicable to the California Environmental Quality Act (CEQA). Under Section 1094.6, any lawsuit or legal challenge to any quasi-adjudicative decision made by the City must be filed no later than the 90th day following the date on which such decision becomes final. Any lawsuit or legal challenge, which is not filed within that 90-day period, will be barred. Government Code section 65009 and 66499.37, and Public Resources Code section 21167, impose shorter limitations periods and requirements, including timely service in addition to filing.

If a person wishes to challenge the above actions in court, they may be limited to raising only those issues they or someone else raised at the meeting described in this notice, or in written correspondence delivered to the City of St. Helena, at or prior to the meeting. In addition, judicial challenge may be limited or barred where the interested party has not sought and exhausted all available administrative remedies.

#### SUPPLEMENTAL MATERIAL RECEIVED AFTER THE POSTING OF THE AGENDA

Any supplemental writings or documents distributed to a majority of the Planning Commission regarding any item on this Agenda, after the posting of the Agenda, will be available for public review in the Planning Department's Office located at 1480 Main Street, St. Helena, California, during normal business hours. In addition, such writings or documents will be made available on the City's web site at <http://cityofstheleena.org> and will be available for public review at the respective meeting.



# Action Minutes City of St. Helena Planning Commission

## Regular Meeting

Tuesday, February 7, 2017 @ 6:00 PM  
Vintage Hall Board Room - Second Floor  
465 Main Street, St. Helena

**PLEASE NOTE:** Any person who wishes to speak regarding an item on the agenda or make a comment under the "Oral Communication" portion of the agenda may do so, but please observe the time limit of three minutes.

Page

1. PLEDGE OF ALLEGIANCE

2. CALL TO ORDER AND ROLL CALL

Chairperson: Grace Kistner

Vice Chair: Vacant

Commissioners: Sarah Parker, Bobbi Monnette, Tracy Sweeney

Staff Present: Noah Housh, Planning and Community Improvement Director, Aaron Hecock, Senior Planner, Lilly Bianco, Contract Planner, Thomas B. Brown, City Attorney, Erica Smithies, Assistant Public Works Director, Xinia Gamero, Administrative Assistant.

3. PUBLIC FORUM:

This is an opportunity for the public to address the Commission on items of interest to the public that are NOT listed on the agenda. Because of restrictions imposed by the Brown Act, the Commission may not engage in discussion nor take action on matters not described on the agenda. **Please observe the time limit of three minutes.**

No Public Comment received.

4. CONSENT ITEMS

Members of the Commission or the public may ask that any items be considered individually for purposes of considering alternative action, for extended discussion, or for public comment. Unless that is done, one motion may be used to adopt all recommended actions. (Roll Call Vote)

4.1. Approval of Minutes November 15, 2016 and December 20, 2016.

# - #

[COMMISSION MINUTES 11-15-16](#)

[COMMISSION MINUTES 12-20-16](#)

4.2. **File Number:** PL16-070

# - #

**Location of Property:** 1330 Madrona Avenue

**Project Description:** Applicant, Ivan Lukrich, on behalf of property owners, Joyce Hoshall, is requesting Design Review approval to perform minor exterior modifications and construct a new master suite at the existing residence at 1330 Madrona Avenue.

**CEQA Determination:** The project is exempt from the requirements of



CEQA pursuant to Section 15301, which exempts minor alterations and additions to existing private structures

**Prepared By:** Lilly Bianco, Contract Planner

**Recommendation:** Staff recommends that the Planning Commission adopt a resolution finding that:

1. The project is exempt from the requirements of CEQA pursuant to CEQA Section 15301 as a minor alteration and addition to an existing structure.
2. Accepts the required findings and approves the design review exemption for the modifications to 1330 Madrona Avenue.

4.3. **File Number:** PL16-084

# - #

**Location of Property:** 1425 Oak Avenue

**Project Description:** Request from the United Methodist Church for approval of a Design Review Exemption to allow the construction of a 400-square foot, free standing shade structure to serve the Sun and Stars Montessori School at 1425 Oak Avenue.

**CEQA Determination:** Staff finds that the project qualifies for a Class 3 Categorical Exemption under Section 15303 of the California Environmental Quality Act.

**Prepared By:** Noah Housh, Planning Director

**Recommendation:** It is recommended by the Planning and Community Improvement Department that the Planning Commission:

1. Determine that the project is exempt from the requirements of CEQA as a Class 3 Categorical Exemption under Section 15303 of CEQA.
2. Accept the required findings and approve the Design Review Exemption for the proposed installation of a 12-foot tall, 400-square foot cloth shade structure to cover the play area at the rear of the building at 1425 Oak Avenue.

4.4. **File Number:** PL16-099

# - #

**Location of Property:** 1475 Main Street

**Project Description:** Request by Julie Spencer on behalf of the Rianda House for sign permit approval in order to place a new informational monument sign on the Rianda House property located at 1475 Main Street in the Business and Professional Office (BPO) district.

**CEQA Determination:** This project is exempt from the requirements of CEQA pursuant to Section 15311 of the CEQA Guidelines, which exempts on-premise business signs.

**Prepared By:** Aaron Hecock, Senior Planner

**Recommendation:** Staff feels the sign is well designed and well placed and is in support of the application. Therefore, staff recommends that

the Planning Commission:

1. Determine that the signs are exempt from the requirements of CEQA pursuant to Section 15311, Class 11(a) of the CEQA Guidelines which exempts on-premise business signs; and
2. Approve the request for a Sign Permit in order to place a new, illuminated, monument sign on the property located at 1475 Main Street.

Noah Housh addressed the Commission.

Commissioner Monnette pulled Item 4.2 and the Minutes from the November 15, 2016 meeting.

**MOTION:** Commissioner Parker moved to approve Items 4.3 and 4.4 on the Consent Calendar. The motion was seconded by Commissioner Monnette and roll call carried by the following vote:

AYES: Commissioner Parker, Monnette, Sweeney and Kistner  
 NOES: None  
 ABSENT: None  
 ABSTAIN: None

**MOTION:** Commissioner Parker moved to approve Item 4.2 on the Consent Calendar. The motion was seconded by Commissioner Sweeney and roll call carried by the following vote:

AYES: Commissioner Parker, Sweeney and Kistner  
 NOES: None  
 ABSENT: None  
 ABSTAIN: Commissioner Monnette

## 5. PUBLIC HEARINGS

### 5.1. **File Number:** PL16-080

# - #

**Location of Property:** 1405 Adams Street

**Project Description:** Applicant, Lauren Gaffney of Wade Design Architects, is requesting Design Review Approval on behalf of property owners, George Duran and Joseph Pon, to construct a new single family residence with attached accessory dwelling, swimming pool, landscaping, and other appurtenant improvements at 1405 Adams Street.

**CEQA Determination:** The project is exempt from the requirements of CEQA pursuant to Section 15303, which exempts the construction single-family residences, amongst other things.

**Prepared By:** Lilly Bianco, Contract Planner

**Recommendation:** Staff finds that the proposed configuration of the site, the overall design elements and proposed materials/finishes are in character with the neighborhood and the community in general.

Because of this staff concludes that design review findings can be made and recommends that the Planning Commission:

1. Determine that the project is exempt from the requirements of CEQA, pursuant to Section 15303, which exempts the construction single-family residences.
2. Accept the required findings and grant design review approval for the Adams Street Residence at 1405 Adams Street.

Lilly Bianco reported on Item.

Luke Wade and Paul Rosinski addressed the Commission.

Chair Kistner opened Public Comment.

No Public Comment received.

Chair Kistner closed Public Comment.

**MOTION:** Commissioner Sweeney moved that the Planning Commission determine that the project is exempt from the requirements of CEQA, pursuant to Section 15303, which exempts the construction single-family residences; and accept the required findings and grant design review approval for the Adams Street Residence at 1405 Adams Street. The motion was seconded by Commissioner Parker and roll call carried by the following vote:

AYES: Commissioner Sweeney, Parker and Kistner

NOES: Commissioner Monnette

ABSENT: None

ABSTAIN: None

5.2. **File Number:** PL16-019

# - #

**Location of Property:** 1367 Main Street

**Project Description:** Request by John Anderson for a Use Permit in order to establish a catering operation in addition to the existing chocolate shop at an existing tenant space located at 1367 Main Street in the CB: Central Business district.

**CEQA Determination:** Staff finds that the project is exempt from the requirements of CEQA pursuant to Section 15301, Class 1, which exempts the operation, leasing, or minor alteration of existing facilities.

**Prepared By:** Aaron Hecock, Senior Planner

**Recommendation:** Staff feels the addition of a catering business to the existing chocolate shop will have minimal impact to surrounding businesses as it won't be an everyday use, will largely occur overnight, won't require the hiring of any additional staff, and will use the existing commercial kitchen. Therefore, staff recommends that the Planning Commission:

1. Determine that the project is exempt from the requirements of CEQA pursuant to Section 15301, Class 1, which exempts the operation, leasing, or minor alteration of existing facilities.

2. Accept the required findings and approve the Use Permit for 1367 Main Street.

Aaron Hecock reported on Item.

Commissioner Sweeney and Chair Kistner disclosed meeting with the applicant prior to the Public Hearing of the Item.

John Anderson, applicant, addressed the Commission.

Chair Kistner opened Public Comment.

No Public Comment received.

Chair Kistner closed Public Comment.

**MOTION:** Commissioner Parker moved that the Planning Commission determine that the project is exempt from the requirements of CEQA pursuant to Section 15301, Class 1, which exempts the operation, leasing, or minor alteration of existing facilities; and accept the required findings and approve the Use Permit for 1367 Main Street. The motion was seconded by Commissioner Monnette and roll call carried by the following vote:

AYES: Commissioner Parker, Monnette, Sweeney and Kistner

NOES: None

ABSENT: None

ABSTAIN: None

6. SCHEDULED MATTERS

7. DEPARTMENT REPORTS

This is an opportunity for staff to report on or update the Commission on any relevant matters.

8. AGENDA FORCAST

Attached is a summary document of pending projects and up coming and items of priority and interest that will be placed on future agendas. This is also an opportunity for the Commission as a whole to request items be placed on future agendas for discussion. These items should be consistent with, and work to implement adopted Council Goals.

8.1. TENTATIVE AGENDA

# - #

9. ADJOURNMENT: Chair Kistner adjourned the meeting at **6:58 p.m.**

APPROVED:

ATTEST:

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Grace Kistner  
Chair, Planning Commission

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Noah Housh  
Planning and Community  
Improvement Director

Action Minutes  
City of St. Helena  
Planning Commission  
Regular Meeting  
Tuesday, February 21, 2017 @ 6:00 PM  
Vintage Hall Board Room - Second Floor  
465 Main Street, St. Helena

1. PLEDGE OF ALLEGIANCE

2. CALL TO ORDER AND ROLL CALL

Present: Chairperson: Grace Kistner, Commissioners: David Knudsen, Sarah Parker, Bobbi Monnette,

Absent: Commissioner: Tracy Sweeney

3. PUBLIC FORUM:

This is an opportunity for the public to address the Commission on items of interest to the public that are NOT listed on the agenda. Because of restrictions imposed by the Brown Act, the Commission may not engage in discussion nor take action on matters not described on the agenda. Please observe the time limit of three minutes.

No public comment received.

4. CONSENT ITEMS

Members of the Commission or the public may ask that any items be considered individually for purposes of considering alternative action, for extended discussion, or for public comment. Unless that is done, one motion may be used to adopt all recommended actions. (Roll Call Vote)

4.1. None

5. PUBLIC HEARINGS

5.1. FILE NUMBER: PL16-058

LOCATION OF PROPERTY: 1111 Main Street

PROJECT DESCRIPTION: The applicant is requesting Master Use Permit approval in order to accommodate a variety of tenants in the existing building adjacent Sunshine Market and Wells Fargo Bank at 1111 Main Street in the Central Business (CB) district consistent with Municipal Code Section 17.48.

CEQA Determination: Staff finds that the project is exempt from the requirements of CEQA pursuant to Section 15301, Class 1, which exempts the operation, leasing, or minor alteration of existing facilities.

Prepared By: Aaron Hecock, Senior Planner

Recommendation: Staff is in general support of this application and recommends that the Planning Commission:

1. Determine that the project is exempt from the requirements of CEQA pursuant to Section 15301, Class 1, which exempts the operation, leasing, or minor alteration of existing facilities.
2. Accept the required findings and approve the Master Use Permit for 1111 Main Street allowing for the uses described in this report.

Planning Director Noah Housh reported on this item.

Applicant representative Caity Hoertkorn Beita addressed the Commission.

Chamber President Pam Simpson addressed the Commission.

MOTION: Commissioner Parker moved to adopt staff's recommendation. The motion was seconded by Chair Kistner and roll call carried by the following vote:

AYES: Commissioner Parker, Kistner and Knudsen

NOES: Commissioner Monnette

ABSENT: None

ABSTAIN: None

Chair Kistner called for a brief recess for staff to address technical difficulties.

Chair Kistner reconvened the meeting.

## 5.2. FILE NUMBER: PL16-042/PL16-043

LOCATION OF PROPERTY: 2555 Main Street/830 Pratt Avenue

PROJECT DESCRIPTION: Applicant is proposing a campus master plan to restructure and expand the educational facilities at the Greystone Campus (2555 Main Street) and expand student enrollment from 200 to 300 students. Also proposed is a 4,468 sf underground storage cave and the installation of three modular storage units at the rear of the building. Concurrently, student housing facilities (dormitories) at the Vineyard Lodge Housing Site (830 Pratt Avenue) will be expanded by 123 net new dorm rooms to accommodate a total of 224 residents. The applicant is requesting the following entitlements: Design Review, Use Permit(s), Demolition Permit, and Variance(s).

CEQA Determination: In accordance with the California Environmental Quality Act (CEQA) Guidelines, an Initial Study and Mitigated Negative Declaration (IS/MND) has been prepared for the proposed project.

Prepared By: Lilly Bianco, Contract Planner

Recommendation: The Planning and Community Improvement Department recommends that

1. Adopt the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program for the project; and
2. Accept the required findings enumerated in Municipal Code Section 17.164.030 and adopt a resolution approving Design Review and a Use Permit for the CIA at Greystone project at 2555 Main Street.
3. Adopt a resolution approving a Demolition Permit, Design Review, a Use Permit, and Variance(s) for the Vineyard Lodge Housing component of the Campus Master Plan at 830 Pratt Avenue.

Contract Planner Lilly Bianco reported on this item.

Applicant Culinary Institute of America (CIA) Managing Director Tom Bensel and CIA consultants Charles Chace, David Bueller and Carolyn Cole addressed the Commission.

Clay Gregory, Mike Quaglia, Philip Norfleet, Anthony McKelly, Donna Hinds, Rusty Hinds, Pat Dell, Amy Thomason, Pam Simpson, Adam Busby, Brian Russell addressed the Commission.

Chair Kistner called for a recess.

Chair Kistner reconvened the meeting.

Nicole Perry, Shannon Lannon, Mike Griffen, Nancy Wallace, citizen, citizen, Jason Roberts and applicant representative Naomi Miroglio addressed the Commission.

Commission Monnette provided a statement of disclosure that she is neutral and did not discuss these matters with her tenant that addressed the Commission during public comment.

A motion was made by Commissioner Parker to continue this item to the March 7, 2017 Planning Commission meeting. The motion was seconded by Commission Monnette and roll call carried by the following vote:

AYES: Commissioner Parker, Monnette, Kistner and Knudsen

NOES: None

ABSENT: None

ABSTAIN: None



Chair Kistner called for a recess.

Chair Kistner reconvened the meeting.

6. SCHEDULED MATTERS

6.1. None

7. DEPARTMENT REPORTS

This is an opportunity for staff to report on or update the Commission on any relevant matters.

Planning Director Housh announced that Sophia Johnson started as the new Permit Technician today.

8. AGENDA FORECAST

Attached is a summary document of pending projects and upcoming and items of priority and interest that will be placed on future agendas. This is also an opportunity for the Commission as a whole to request items be placed on future agendas for discussion. These items should be consistent with, and work to implement adopted Council Goals.

Planning Director Noah Housh encouraged the Commissioners to review the tentative agenda and communicate any questions they might have to him.

Chair Kistner requested an update on the General Plan be added to the list.

9. ADJOURNMENT: Chair Kistner adjourned the meeting at 9:47 p.m.

APPROVED:

ATTEST:

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Grace Kistner  
Chair, Planning Commission

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Noah Housh  
Planning and Community  
Improvement Director

**CITY OF ST. HELENA  
PLANNING DEPARTMENT 1480 MAIN STREET- ST. HELENA, CA 94574  
PLANNING COMMISSION**

**March 7, 2017**

**AGENDA SECTION:** Consent

**FILE NUMBER:** PL17-002

**SUBJECT:** Temple Accessory Shed Design Review Exemption

**PREPARED BY:** Lilly Bianco, Contract Planner

**REVIEWED BY:** Noah Housh, Planning Director

**APPLICATION FILED:** 01/16/17

**ACCEPTED AS COMPLETE:** 02/22/17

**LOCATION OF PROPERTY:** 1017 N. Crane Avenue

**APN:** 009-322-003

**GENERAL PLAN/ZONING:** Medium Density Residential (MR)

**APPLICANT:** David Hanawalt, AIA, Lail Design Group

**PHONE:** (707) 564-8000

**PROJECT DESCRIPTION**

Applicant, David Hanawalt, on behalf of property owner, Charlotte Temple, is requesting Design Review approval to construct a 15' x 27' accessory structure with a height of 12'8" to serve as a fireproof photography storage shed and limited landscape improvements including introduction of a concrete pathway and small plantings. The accessory structure would be supported by a concrete slab-on-grade foundation and constructed of concrete block walls with gabled roof that exhibits a pitch consistent with the primary residence. The structure will feature board and batten siding and galvanized metal roof to match the materials and finishes of the primary residence. Pursuant to St. Helena Zoning Code, Section Sec. 17.164.060, staff recommends the Planning Commission approve an exemption from Design Review given that the project poses no substantial design problems and meets the criteria for an exemption pursuant to Municipal Code Section 17.164.030 and as described in more detail below.

**ANALYSIS**

**GENERAL PLAN**

The subject property exhibits a General Plan Land Use designation of Medium Density Residential. This land use designation allows single family detached and attached homes, secondary residential units, and other compatible uses including accessory

*Temple Accessory Shed  
1017 N. Crane Avenue  
Design Review Exemption  
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structures. The Medium density residential land use designation serves as the predominant residential land use designation and is intended to perpetuate the existing development patterns exhibited by St. Helena's established neighborhoods.

### **ZONING**

Consistent with the GP land use designation, 1017 N Crane Avenue exhibits a zoning designation of MR: Medium Density Residential. The MR Zoning District allows for accessory structures insofar as they conform to the development standards prescribed by Municipal Code Section 17.40.060 and Section 17.116.010.

Review of the project indicates that it meets all applicable development standards; the proposed project would introduce a new accessory structure of 405 square feet to be located at the property rear, limited in scale relative to the primary residence and accessory dwelling and not readily visible from the public right of way. As proposed the project would not exceed thresholds established for maximum coverage of a required setback. Calculations indicate that 50 percent of the rear setback area would amount to 589 sf; taken together, the portion of square footage of the existing *and* proposed accessory structures that are within the rear setback area would amount to 472 square feet, which equates to less than 50 percent coverage. Similarly, with the addition of the proposed accessory structure, the subject property would exhibit an FAR of 0.195 which is within the allowable FAR of 0.30 (3,300 sf). The proposed structure would exhibit side setbacks of 11'2" and rear setback of 7'6" and therefore exceed the minimum required setbacks of 3 feet.

### **NET FLOOR AREA:**

|                            |         |
|----------------------------|---------|
| EXISTING RESIDENCE         | 1312 SF |
| EXISTING ADU               | 435 SF  |
| EXISTING ACCESS. STRUCTURE | 122 SF  |
| PROPOSED ACCESS. STRUCTURE | 405 SF  |

---

|              |                 |
|--------------|-----------------|
| <b>TOTAL</b> | <b>2,274 SF</b> |
|--------------|-----------------|

**FLOOR AREA RATIO: 2274 /11,641 SF = 0.195**

### **DESIGN REVIEW**

The purpose of design review is to, among other things, promote the qualities that bring value to the community and foster attractiveness and functional utility of the community as a place to live and work. Consistent with Zoning Code Section 17.164.060, the Commission may approve a design review exemption insofar as the project raises no substantial design problems of the sort enumerated in sections 17.164.010 to 17.164.030. The project therefore must be obviously consistent with the design criteria prescribed by Section 17.164.030 (detailed below) and exhibit a quality of design that is compatible with adjacent development, features a siting, scale, massing and architectural style that is generally consistent with the predominant development patterns, and that does not otherwise detract or negatively affect the established

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character of the surrounding neighborhood. Consistency findings related to the Design Review Criteria and enumerated, below.

Design Review Criteria.

1. Consistency and compatibility with applicable elements of the general plan. *As an accessory structure of an appropriate size, scale, and siting and on a medium density residential property, the project would not conflict with or otherwise prevent the attainment of any GP policies, goals, or objectives.*
2. Compatibility of design with the immediate environment of the site;  
*The shed will be compatible in that it will be of a scale clearly subordinate to the primary residence and features materials, finishes, and roof pitch that match the primary residence.*
3. Relationship of the design to the site;  
*The shed will be located at the rear of the property and subordinate to the primary residence.*
4. Determination that the design is compatible in areas considered by the board as having a unified design or historical character;  
*The proposed shed will be located at the rear of the property and exhibit a max height of 12'8" such that it would not be readily visible from street frontage and would not affect the character of the greater neighborhood.*
5. Whether the design promotes harmonious transition in scale and character in areas between different designated land uses;  
*The proposed shed would not be visible from street frontage and therefore would not be expected to affect the visual transitions exhibited by different land use areas.*
6. Compatibility with future construction both on and off the site;  
*The shed will match the primary residence in terms of materials, finishes, and roof pitch and therefore is and would continue to be compatible with construction on site.*
7. Whether the architectural design of structures and their materials and colors are appropriate to the function of the project;  
*The proposed shed will be of a simple design and able to adequately function as a photography shed.*
8. Whether the planning and siting of the various functions and buildings on the site create an internal sense of order and provide a desirable environment for occupants, visitors and the general community;  
*The site includes an existing residence, accessory dwelling, and accessory structure. The existing accessory structure (122 sf) and accessory dwelling (435 sf) and proposed accessory photography shed (405 sf) would be situated at the rear of the property with adequate separation and property setbacks. Further, the uses are scaled such that there is clear hierarchy in terms of the primary residence, accessory dwelling, and accessory sheds. They would be generally located around the periphery of the backyard with connectivity between the uses provided by a small pathway. Given that all of the structures exhibit adequate separation and placement around the yard periphery, the project would promote an internal sense of order and provide a desirable environment.*
9. Whether the amount and arrangement of open space and landscaping are appropriate to the design and the function of the structures;

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1017 N. Crane Avenue  
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*As an accessory photography shed serving a single family residence additional open space or landscaping is not necessary for the design or functionality of the structure.*

10. Whether sufficient ancillary functions are provided to support the main functions of the project and whether they are compatible with the project's design concept;  
*No additional ancillary functions are proposed.*
11. Whether access to the property and circulation systems are safe and convenient for pedestrians, cyclists and vehicles;  
*The project does not propose any changes to circulation systems or site access.*
12. Whether natural features are appropriately preserved and integrated with the project;  
*The limited size of the shed would not affect significant natural features. The project would necessitate the removal of two 2' caliper olive trees which are not considered significant natural features. A limited amount (<500sf) of landscaping will be introduced to enhance the backyard landscaping.*
13. Whether the materials, textures, colors and details of construction are an appropriate expression of its design concept and function and whether they are compatible with the adjacent and neighboring structure and functions;  
*The accessory structure would be supported by a concrete slab-on-grade foundation and constructed of concrete block walls with gabled roof that exhibits a pitch consistent with the primary residence. The structure will feature board and batten siding and galvanized metal roof to match the materials and finishes of the primary residence. As such, the project would be compatible with neighboring structures.*
14. In areas considered by the board as having a unified design character or historical character, whether the design is compatible with such character;  
*As an ancillary shed at the rear of the subject property, the project would not affect the character of the greater neighborhood.*
15. Whether the landscape design concept for the site, as shown by the relationship of plant masses, open space, scale, plant forms and foliage textures and colors create a desirable and functional environment and whether the landscape concept depicts an appropriate unity with the various buildings on the site;  
*The project would include the introduction of 6' to 10' shrubs in the backyard and along the fence line which appear appropriate for the design and function of the project.*
16. Whether plant material is suitable and adaptable to the site, capable of being properly maintained on the site, and is of a variety which is suitable to the climate of St. Helena;  
*The minimal amount of landscaping proposed and which included a limited amount of shrubs would be suitable for the subject site.*
17. Whether sustainability and climate protection are promoted through the use of green building practices such as appropriate site/architectural design, use of green building materials, energy efficient systems and water efficient landscape materials.  
*The proposed structure has no water supply or wastewater. Further, as detailed in the applicant's written statement, the mechanical system proposed to maintain a steady indoor temperature and humidity for photography archive*

Temple Accessory Shed  
1017 N. Crane Avenue  
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March 7, 2017

*is the most efficient unit rated in the category by Energystar. As such, the project adequately promotes and furthers sustainability goals.*

#### **Staff Findings**

The proposed project is limited to the construction of an accessory structure and minimal landscape improvements (concrete path and shrubs) at the rear of the property which is incidental and clearly subordinate to the primary structure and substantially matches the primary building in terms of materials and finishes. Staff finds that the proposed modifications are of a scale, massing, and quality of design that is appropriate for the subject property. Given its location at the rear of the property it is not expected to diminish or otherwise detract from the character of the neighborhood or that of adjacent properties. Accordingly, the proposed project appears to be consistent with all applicable design review criteria.

#### **CEQA**

The project is exempt from the requirements of CEQA pursuant to Section 15303, which exempts Accessory (appurtenant) structures including garages, carports, patios, swimming pools, and fences. The proposed project is not subject to any of the exceptions to the use of a categorical exemption as outlined in CEQA Section 15300.2. The project site is not located on or near an environmentally sensitive area, is not visible from a scenic highway, is not included on a hazardous waste site, and will not impact historic resources or otherwise generate or contribute to any potentially significant impacts.

#### **STAFF RECOMMENDATION**

Staff recommends that the Planning Commission adopt a resolution finding that:

1. The project is exempt from the requirements of CEQA pursuant to CEQA Section 15303 as the construction of an accessory structure.
2. Accepts the required findings and approves the design review exemption for the Temple Shed at 1017 N. Crane Avenue.

#### **ATTACHMENTS**

1. Resolution / Conditions of Approval
2. APN Map
3. Aerial View
4. Project Plans
5. Project Narrative

*Temple Accessory Shed  
1017 N. Crane Avenue  
Design Review Exemption  
March 7, 2017*



**CITY OF ST. HELENA PLANNING COMMISSION**

**RESOLUTION NO.**

**RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF ST. HELENA  
GRANTING APPROVAL OF A DESIGN REVIEW EXEMPTION  
FOR THE TEMPLE ACCESSORY SHED LOCATED AT 1017 N. CRANE AVENUE**

**PROPERTY OWNER:** Mr. David Hanawalt

**APN:** 009-322-003

**Recitals**

**A. Whereas**, Mr. David Hanawalt submitted an application for a Design Review Exemption to construct a new accessory structure at 1017 Crane Avenue in the MR: Medium Density Residential District, and

**D. Whereas**, A staff report dated March 7, 2017 and incorporated herein by reference analyzed the projects consistency with the Design Criteria enumerated in Section 17.164.030 of the Municipal Code, and

**D. Whereas**, the Planning Commission of the City of St. Helena, State of California, considered the project, staff report, and all testimony, written and spoken, at a duly noticed public hearing on March 7, 2017, and

**E. Now, therefore** let it be found that, the Planning Commission approves the Design Review Exemption and authorizes the modifications contained in said plans based on the findings below and subject to the conditions of approval enumerated herein.

**Resolution**

1. The project is exempt from the requirements of CEQA pursuant to Section 15303, which exempts Accessory (appurtenant) structures including garages, carports, patios, swimming pools, and fences. The proposed project is not subject to any of the exceptions to the use of a categorical exemption as outlined in CEQA Section 15300.2. The project site is not located on or near an environmentally sensitive area, is not visible from a scenic highway, is not included on a hazardous waste site, and will not impact historic resources or otherwise generate or contribute to any potentially significant impacts.

2. DESIGN REVIEW:

The purpose of design review is to, among other things, promote the qualities that bring value to the community and foster attractiveness and functional utility of the community as a place to live and work. Consistent with Zoning Code Section 17.164.060, the Commission may approve a design review exemption insofar as the project raises no substantial design problems of the sort enumerated in sections 17.164.010 to 17.164.030. The project therefore must be obviously consistent with the design criteria prescribed by Section 17.164.030 (detailed below) and exhibit a quality of design that is compatible with adjacent development,



features a siting, scale, massing and architectural style that is generally consistent with the predominant development patterns, and that does not otherwise detract or negatively affect the established character of the surrounding neighborhood.

Design Review Criteria:

1. Consistency and compatibility with applicable elements of the general plan. *As an accessory structure of an appropriate size, scale, and siting and on a medium density residential property, the project would not conflict with or otherwise prevent the attainment of any GP policies, goals, or objectives.*
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*The shed will be compatible in that it will be of a scale clearly subordinate to the primary residence and features materials, finishes, and roof pitch that match the primary residence.*
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*The proposed shed will be located at the rear of the property and exhibit a max height of 12'8" such that it would not be readily visible from street frontage and would not affect the character of the greater neighborhood.*
5. Whether the design promotes harmonious transition in scale and character in areas between different designated land uses;  
*The proposed shed would not be visible from street frontage and therefore would not be expected to affect the visual transitions exhibited by different land use areas.*
6. Compatibility with future construction both on and off the site;  
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7. Whether the architectural design of structures and their materials and colors are appropriate to the function of the project;  
*The proposed shed will be of a simple design and able to adequately function as a photography shed.*
8. Whether the planning and siting of the various functions and buildings on the site create an internal sense of order and provide a desirable environment for occupants, visitors and the general community;  
*The site includes an existing residence, accessory dwelling, and accessory structure. The existing accessory structure (122 sf) and accessory dwelling (435 sf) and proposed accessory photography shed (405 sf) would be situated at the rear of the property with adequate separation and property setbacks. Further, the uses are scaled such that there is clear hierarchy in terms of the primary residence, accessory dwelling, and accessory sheds. They would be generally located around the periphery of the backyard with connectivity between the uses provided by a small pathway. Given that all of the structures exhibit adequate separation and placement around the yard periphery, the project would promote an internal sense of order and provide a desirable environment.*
9. Whether the amount and arrangement of open space and landscaping are appropriate to the design and the function of the structures;

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10. Whether sufficient ancillary functions are provided to support the main functions of the project and whether they are compatible with the project's design concept;  
*No additional ancillary functions are proposed.*
11. Whether access to the property and circulation systems are safe and convenient for pedestrians, cyclists and vehicles;  
*The project does not propose any changes to circulation systems or site access.*
12. Whether natural features are appropriately preserved and integrated with the project;  
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17. Whether sustainability and climate protection are promoted through the use of green building practices such as appropriate site/architectural design, use of green building materials, energy efficient systems and water efficient landscape materials.  
*The proposed structure has no water supply or wastewater. Further, as detailed in the applicant's written statement, the mechanical system proposed to maintain a steady indoor temperature and humidity for photography archive is the most efficient unit rated in the category by Energy star. As such, the project adequately promotes and furthers sustainability goals.*

The proposed project is limited in scope and limited to the construction of an accessory structure and limited landscape improvements (concrete path and shrubs) at the rear of the property which is incidental and clearly subordinate to the primary structure and substantially matches the primary building in terms of materials and finishes. Staff finds that the proposed modifications are of a scale, massing, and quality of design that is appropriate for the subject property. Given its location at the rear of the property it is not expected to diminish or otherwise detract from the character of the neighborhood or that of adjacent properties. Accordingly, the proposed project appears to be consistent with all applicable design review criteria.

**F. Now therefore be it further resolved** that, the Design Review for the above described project is granted subject to compliance with all applicable provisions of the Zoning Code subject to each of the following conditions. Permit shall be in conformance with all City ordinances, rules, regulations and policies in effect at the time of issuance of a building permit. The conditions noted below are particularly pertinent to this permit and shall not be construed to permit violation of other laws and policies not so listed.

#### **Conditions of Approval**

1. The Permit shall be in conformance with all City ordinances, rules, regulations and policies in effect at the time of issuance of a building permit. The conditions noted below are particularly pertinent to this permit and shall not be construed to permit violation of other laws and policies not so listed.
2. The plans submitted for building permit review shall be in substantial conformance with the plans on file in the Planning Division, date stamped December 5, 2016, except as modified by the following conditions.
3. The Design Review Exemption shall be vested within one (1) year from the date of approval. A building permit for the use allowed under this approval shall have been obtained within one (1) year from the effective date of the Use Permit and Design Review decision or these approvals shall expire; provided however that the approved Use Permit and Design Review may be extended for up to two (2) one-year periods pursuant to the St. Helena Municipal Code, Section 17.08.030, Extension of Permits and Approvals.
4. The Design Review Exemption shall become effective fourteen (14) calendar days after approval, provided that the action is not appealed by the City Council or any other interested party within that 14 day period.
5. Any request for an extension of the Design Review Exemption must be justified in writing and received by the Planning Department at least thirty (30) days prior to expiration.
6. All required fees, including planning fees, development impact fees, building fees, retrofit fees, and St. Helena Unified School District fees shall be paid prior to issuance of building permit.

7. Prior to issuance of construction permits, compliance with conditions of approval shall be clearly identified on all plans. A copy of approved plans with the conditions listed *on* said plans shall be maintained on-site during construction activities.
8. Conditions shall be achieved at such a time as determined by the City and shall be achieved at the requisite stage and before issuance of certificate of occupancy or initiation of use unless another time is set by law or by this approval. Occupancy or final inspection of a project may be withheld if all conditions, including payment of fees for services rendered by the City, are not met.
9. The applicant shall defend and indemnify and hold the City, its agents, officers, and employees harmless of any claim, action or proceedings to attack, set aside, void or annul an approval so long as the City promptly notifies the applicant of any such claim, action, or proceedings and the City cooperates fully in the defense of the action or proceedings.
10. This Design Review approval shall run with the land and shall be binding upon all parties having any right, title or interest in the real property or any part thereof, their heirs, successors and assigns, and shall inure to their benefit and benefit of the City of St. Helena.
11. The primary purpose of this review is for compliance with the General Plan and Zoning Ordinance. The owner/applicant is responsible for meeting with the Building Official / Fire Inspector to review compliance with Building and Fire Codes, including fire protection systems and the accessibility standards of Title 24.
12. No structure shall be permitted over any existing property lines. Documentation of the location of the property lines shall be submitted with plans for building permit issuance.
13. A building permit is required for any onsite demolition, construction or change of occupancy.
14. Fire sprinklers could be required depending on the extent of the modifications to the ceiling envelop. This will be determined as a component of the building permit review.

#### **Public Works Department Conditions of Approval**

15. Approval of this project shall be subject to the requirements of, and all improvements shall be designed and constructed in accordance with, the most current version at the time of improvement plan submittal, Caltrans Standards and Specifications, the City of St. Helena Municipal Code, the St. Helena Water and Sewer Standards, the St. Helena Street, Storm Drain and Sidewalk Standards, and all current federal, state and county codes governing such improvements.
16. For any improvements outside the existing building envelope, a grading and drainage plan showing topographic data, all easements, infrastructure onsite and

directly adjoining, and an erosion control plan shall be submitted for review and approval by the City Engineer prior to the issuance of a building permit. If the project entails more than 50 cubic yards of soil disturbance, 10,000 square feet of disturbance area, a cut or fill of 3 feet or more, or alteration of any drainage pattern, a grading permit shall be required.

17. Drainage needs to be routed to prevent inundation of neighboring properties. Grading and/or site improvement plans shall show how 2-year and 10-year storm flows shall be infiltrated on site and/or diverted at the property lines to prevent inundation of neighboring properties.
18. If the project includes 500 square feet or more of new landscaping and/or 2,500 square feet or more of rehabilitated landscape, the proposed landscaping shall comply with the State's Model Water Efficient Landscape Ordinance (MWELo).
19. Erosion and sediment control plans shall conform to the latest State and City codes at a minimum.
20. Provide details of any and all proposed fencing and/or walls on all plans submitted for building permit review.

**I HEREBY CERTIFY** that the foregoing Design Review Exemption was duly and regularly approved by the Planning Commission of the City of St. Helena at a regular meeting of said Planning Commission held on March 7, 2017 by the following roll call vote:

**AYES:**

**NOES:**

**ABSENT:**

**ABSTAIN:**

APPROVED:

ATTEST:

---

Grace Kistner  
Chair, Planning Commission

---

Noah Housh,  
Planning and Community  
Improvement Director

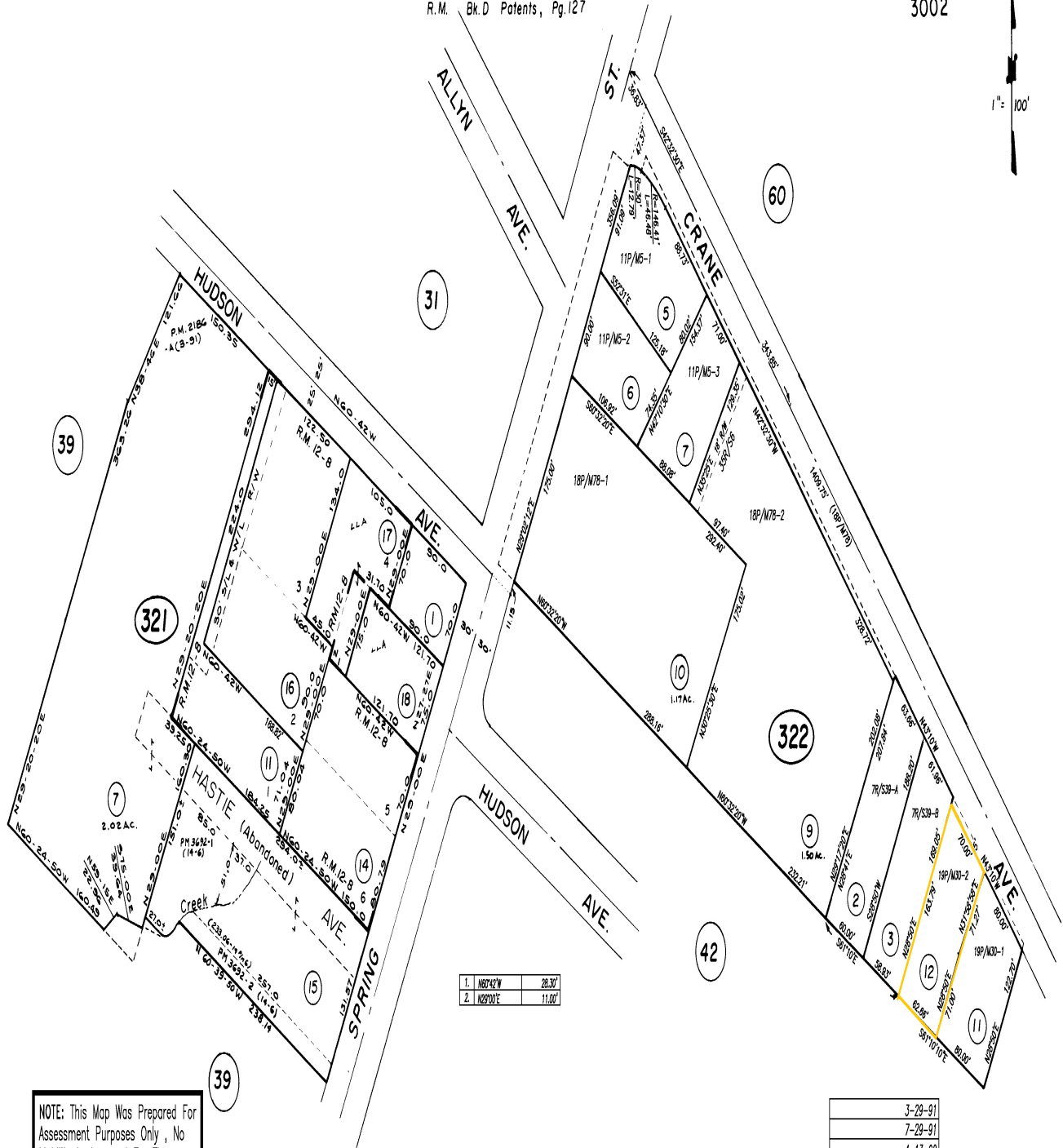
# COUNTY ASSESSOR'S PARCEL MAP

PTN. CARNE HUMANA RANCHO

R.M. Bk.D Potents, Pg.127

9-32

Tax Area Code  
3002



NOTE: This Map Was Prepared For Assessment Purposes Only, No Liability Is Assumed For The Accuracy Of The Data Delineated Hereon.

Assessor of Napa County

REVISIONS 1978

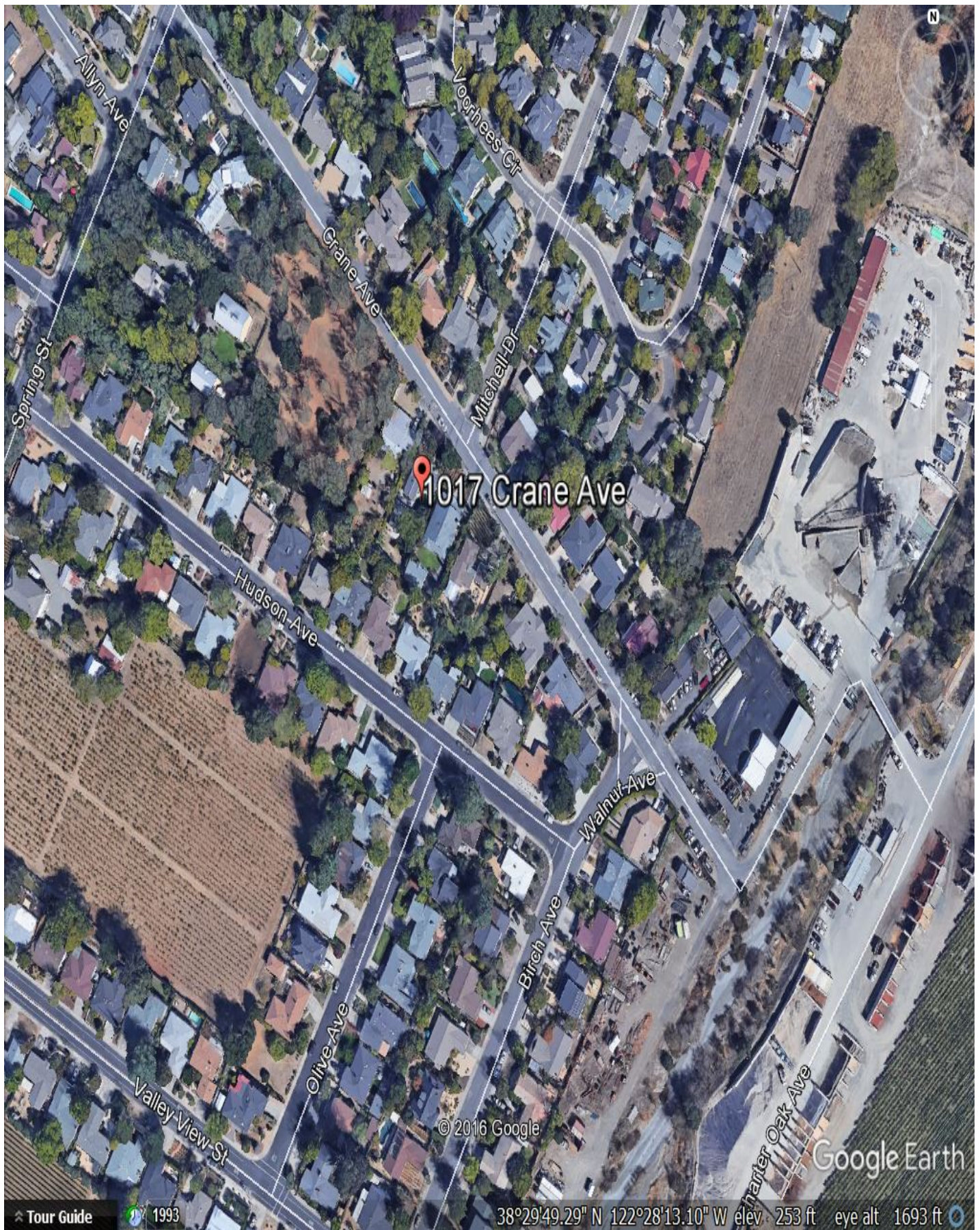
Spottswode Unit No.1 R.M.Bk.12, Pg.8

|           | 3-29-91  |
|-----------|----------|
|           | 7-29-91  |
|           | 4-13-92  |
|           | 11-16-92 |
| 322-09 RS | 6-27-02  |
| REVISION  | DATE     |

9-32







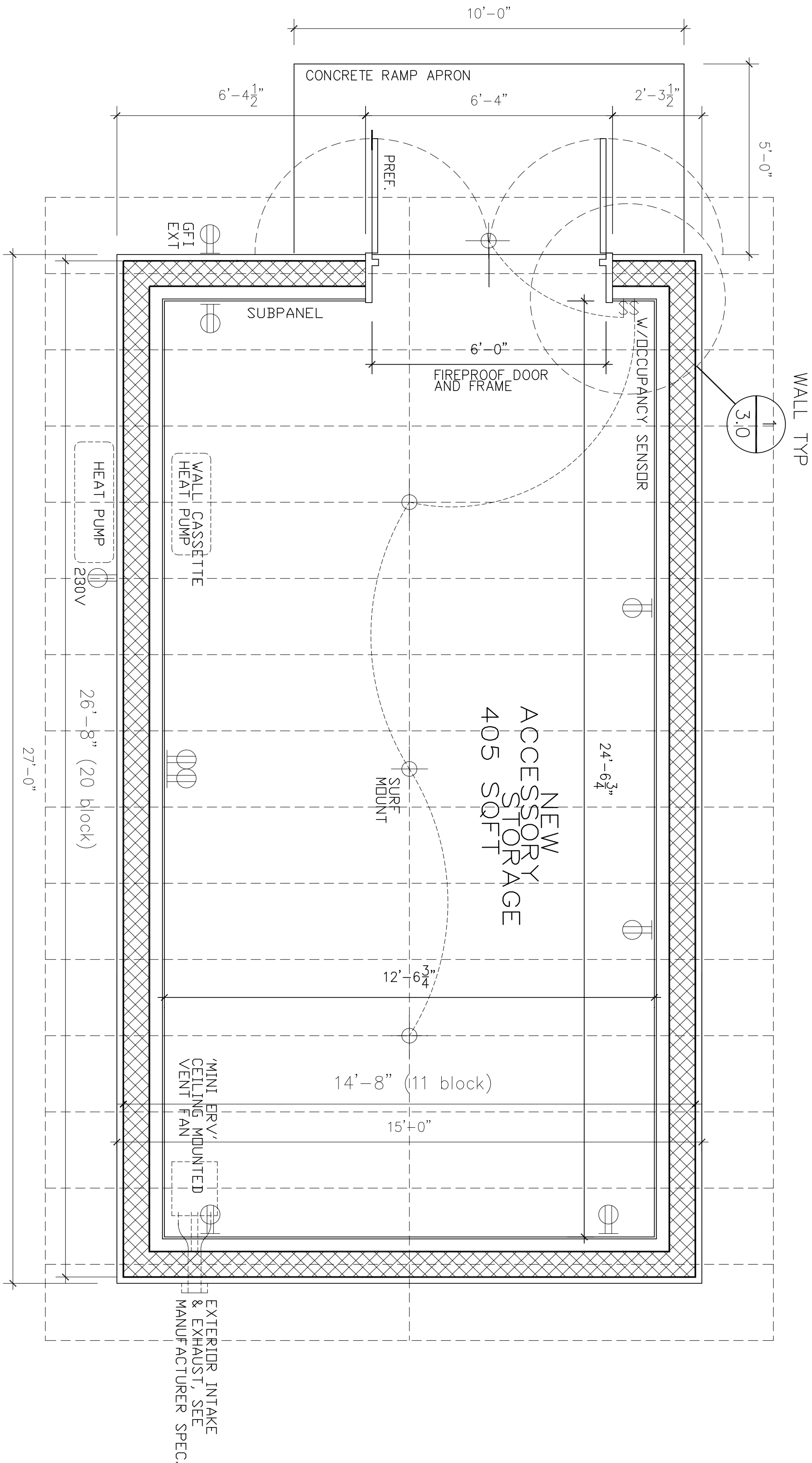






1 SITE PLAN  
1/16" = 1'-0"

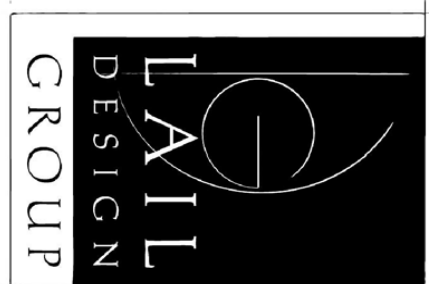
PROPOSAL INCLUDES:  
NEW 405 SQFT ACCESSORY STORAGE SHED  
WITH 100 AMP ELEC CONNECTION  
WITHOUT WATER/SEWER CONNECTION  
NEW 4" CONCRETE DRIVEWAY SLAB WITH  
CONTROL JOINTS @20' OC MIN  
TO BE POURED AT EXISTING P2A GRAVEL  
DRAINAGE BEHIND EX'S DRIVEWAY  
LANDSCAPE PROPOSED NEW <500 SQFT  
AND PROPOSED REPAV <2500 SQFT  
PLANNING NOTE:  
NO ELEMENTS OF PROPOSED TO BE  
VISIBLE FROM STREET FRONTAGE



2 FLOOR PLAN  
1/2" = 1'-0"

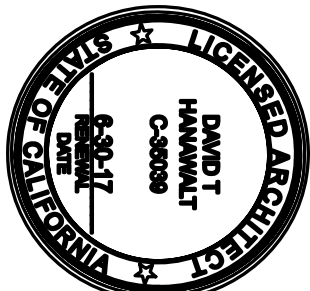
MINI SPLIT HEAT PUMP  
DAIKIN QUATERNITY  
HEAT/AC WITH HUMIDITY REMOVAL  
INTERIOR UNIT: FTXQ3HVJU  
EXTERIOR UNIT: RXG09HVJU  
60 HZ 230V 1100W.

MINI ERV  
PANASONIC WHISPER COMFORT  
ENERGY RECOVERY VENTILATOR  
#FV-04VE1  
SETTINGS: 40 CFM INTERMITTENT  
20 CFM DR 10 CFM CONTINUOUS



1127 Pope Street, Suite 106  
Saint Helena, CA 94574  
TEL 707 963 1555 FAX 707 963 4509

David Hanawalt AIA  
PROJECT ARCHITECT



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TEMPLE  
SHED  
ACCESSORY  
STRUCTURE-  
ARCHIVE

1017 NORTH GRANE ROAD  
ST. HELENA, CALIFORNIA  
APN: 009-322-003

|                |            |
|----------------|------------|
| PROJECT NUMBER | 476        |
| DATE           | 12/15/2016 |
| CHECKED BY     | JLH        |
| DRAWN BY       |            |
| SCALE          | AS NOTED   |
| REVISIONS      |            |

XXXXXX

SITE PLAN  
&  
FLOOR PLAN

B-1.0

PERMIT SUBMITTAL



# TEMPLE SHED, ST. HELENA

## ACCESSORY STRUCTURE- ARCHIVE

### 1017 NORTH CRANE ROAD, SAINT HELENA, CA 94574

#### GENERAL NOTES

1. APPLICABLE BUILDING CODES: TITLE 24  
PART 2 : 2013 CALIFORNIA BUILDING CODE  
PART 2.9 : 2013 CALIFORNIA ELECTRICAL CODE  
PART 3: 2013 CALIFORNIA RESIDENTIAL CODE  
PART 4: 2013 CALIFORNIA MECHANICAL CODE  
PART 5: 2013 CALIFORNIA PLUMBING CODE  
PART 6: 2013 CALIFORNIA ENERGY CODE  
PART 8: 2013 CALIFORNIA FIRE CODE  
PART 11: 2013 CALIFORNIA GREEN BUILDING STANDARDS CODE  
AND CITY OF ST. HELENA CODE
2. THE CONTRACTOR SHALL PROVIDE WORKMANSHIP INSURANCE, LIABILITY INSURANCE, AND COMPLETION INSURANCE IN THE AMOUNT OF THE COST OF CONSTRUCTION.
3. THE CONTRACTOR SHALL GUARANTEE ALL LABOR AND MATERIALS FOR A MINIMUM OF ONE YEAR, AND MATERIALS FOR A MINIMUM OF TWO YEARS OR AS SPECIFIED.
4. THE GENERAL CONTRACTOR SHALL VERIFY ALL STARTING WORK. THE CONTRACTOR SHALL NOTIFY LAL DESIGN GROUP OF DISCREPANCIES.
5. CONTRACTOR SHALL VERIFY EXISTENTS (PUBLIC UTILITIES, CABLE, TV, AND GAS PRIOR TO STARTING CONSTRUCTION).
6. VERIFY ALL UTILITIES, GUTS, AND LOCATIONS PRIOR TO STARTING CONSTRUCTION.
7. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER DIMENSIONS SHOWN ON DRAWINGS. WHERE DISCREPANCIES OCCUR, NOTIFY LAL DESIGN GROUP FOR CLARIFICATION.
8. ACCEPT NO PAY OR PUNCH CORRECTIONS TO THESE DRAWINGS WITHOUT THE DESIGNER'S INITIALS AND SIGNATURE. ALL CHANGES NOT IN CONFORMANCE WITH THIS PROVISION.
9. ALL USERS OF THESE DRAWINGS AGREE BY USING THEM TO BE RESPONSIBLE FOR ANY AND ALL WORK THAT DOES NOT COMPLY WITH THE APPLICABLE BUILDING CODES, LOCAL ORDINANCES, AND ACCEPTABLE STANDARDS.
10. THESE DRAWINGS ARE THE PROPERTY OF LAL DESIGN GROUP. THEY ARE TO BE USED ONLY FOR THE PROJECT SHOWN ON THESE PLANS.
11. LAL DESIGN GROUP SHALL HAVE NO CONTROL OR LIABILITY FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, PRELIMINATIONS AND PROGRAMS IN CONNECTION WITH THE WORK.
12. LAL DESIGN GROUP ASSUMES NO RESPONSIBILITY FOR PERFORMANCE OF PRODUCTS OR MATERIALS SPECIFIED.
13. PERMITS REQUIRED BY TITLE 24, THEREBY CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CALIFORNIA BUILDING COMMISSION (CBC), EQUIPMENT RECORDING IS TO BE APPROVED WITH COMPLETE PRINTED MAINTENANCE INSTRUCTIONS.
14. REFER TO THE PROJECT MANUAL FOR DETAILED INTERFERENCE REQUIREMENTS AND INPUT/OUTPUT LISTS AND REQUIREMENTS.
15. THE CONTRACTOR SHALL FINISH ALL SYSTEMS INSTALLATION IN ACCORDANCE WITH EXISTING AND ACCEPTABLE TRADE PRACTICE.
16. THESE VARIATIONS ARE REQUIRED FOR THIS PROJECT AND ARE NOT TO BE USED FOR ANY OTHER PROJECT PRIOR TO FINAL INSPECTION.

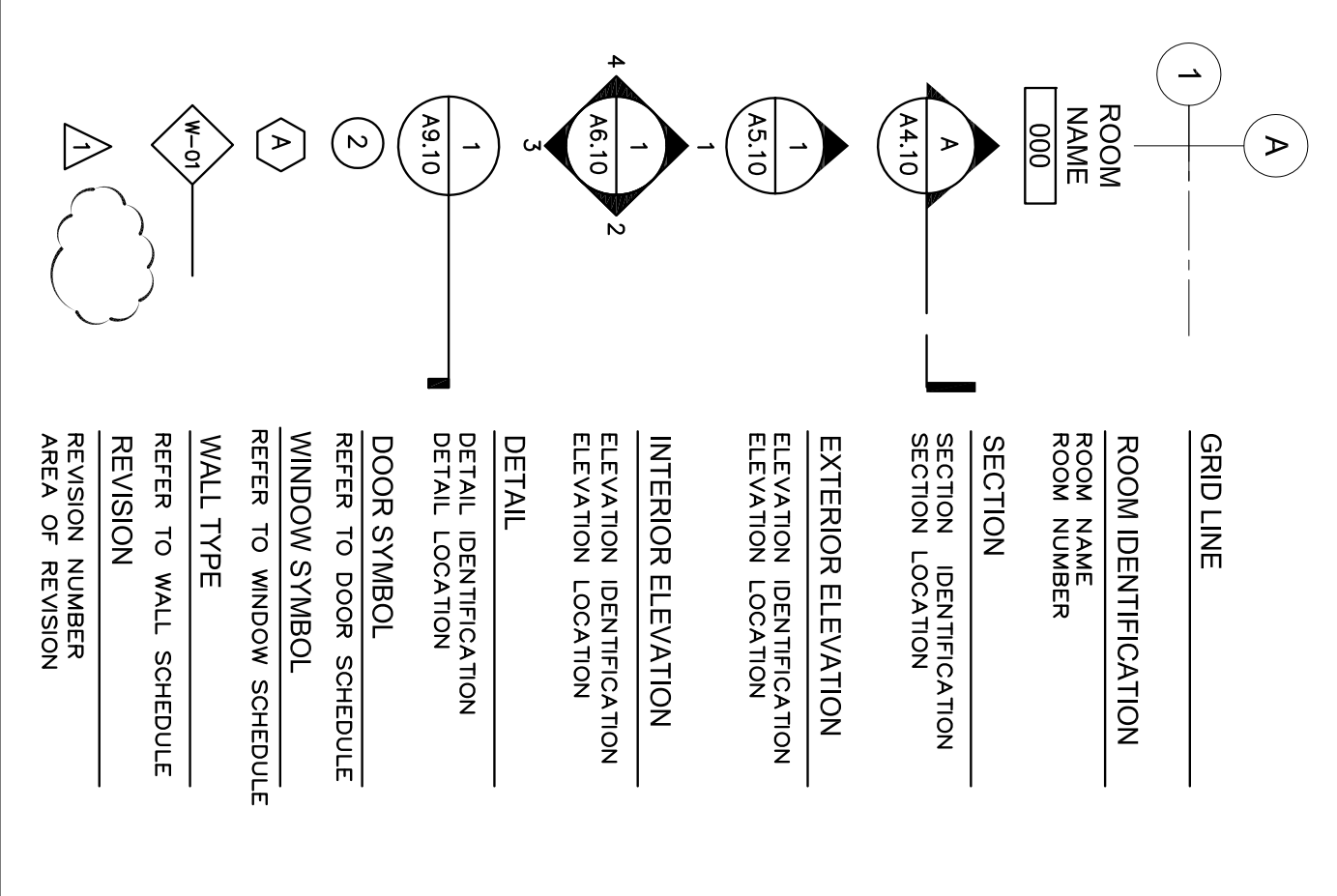
#### ABBREVIATIONS

|     |               |     |                  |
|-----|---------------|-----|------------------|
| 4   | ANGLE         | EMF | EMERGENCY        |
| 5   | CONTINUING    | EP  | ELECTRICAL PANEL |
| 6   | SHED          | EQ  | EQUAL            |
| 7   | SHED/ROUND    | EXT | EXTENSION        |
| 8   | PERPENDICULAR | FA  | FIRE ALARM UNIT  |
| 9   | ANGLE BOIT    | FB  | FLOOR BEAM       |
| 10  | ANGLE BOIT    | FF  | FIRE FIGHTER     |
| 11  | ANGLE BOIT    | FN  | FLOOR FINISH     |
| 12  | ANGLE BOIT    | FL  | FLOOR FINISH     |
| 13  | ANGLE BOIT    | FM  | FLOOR FINISH     |
| 14  | ANGLE BOIT    | FR  | FLOOR FINISH     |
| 15  | ANGLE BOIT    | FS  | FLOOR FINISH     |
| 16  | ANGLE BOIT    | FT  | FLOOR FINISH     |
| 17  | ANGLE BOIT    | FW  | FLOOR FINISH     |
| 18  | ANGLE BOIT    | FX  | FLOOR FINISH     |
| 19  | ANGLE BOIT    | FZ  | FLOOR FINISH     |
| 20  | ANGLE BOIT    | GA  | GALE             |
| 21  | ANGLE BOIT    | GB  | GALE             |
| 22  | ANGLE BOIT    | GC  | GALE             |
| 23  | ANGLE BOIT    | GD  | GALE             |
| 24  | ANGLE BOIT    | GE  | GALE             |
| 25  | ANGLE BOIT    | GF  | GALE             |
| 26  | ANGLE BOIT    | GG  | GALE             |
| 27  | ANGLE BOIT    | GH  | GALE             |
| 28  | ANGLE BOIT    | GI  | GALE             |
| 29  | ANGLE BOIT    | GJ  | GALE             |
| 30  | ANGLE BOIT    | GK  | GALE             |
| 31  | ANGLE BOIT    | GL  | GALE             |
| 32  | ANGLE BOIT    | GM  | GALE             |
| 33  | ANGLE BOIT    | GN  | GALE             |
| 34  | ANGLE BOIT    | GO  | GALE             |
| 35  | ANGLE BOIT    | GP  | GALE             |
| 36  | ANGLE BOIT    | GQ  | GALE             |
| 37  | ANGLE BOIT    | GR  | GALE             |
| 38  | ANGLE BOIT    | GS  | GALE             |
| 39  | ANGLE BOIT    | GT  | GALE             |
| 40  | ANGLE BOIT    | GU  | GALE             |
| 41  | ANGLE BOIT    | GV  | GALE             |
| 42  | ANGLE BOIT    | GW  | GALE             |
| 43  | ANGLE BOIT    | GX  | GALE             |
| 44  | ANGLE BOIT    | GZ  | GALE             |
| 45  | ANGLE BOIT    | HA  | HALE             |
| 46  | ANGLE BOIT    | HB  | HALE             |
| 47  | ANGLE BOIT    | HC  | HALE             |
| 48  | ANGLE BOIT    | HD  | HALE             |
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| 52  | ANGLE BOIT    | HH  | HALE             |
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| 56  | ANGLE BOIT    | HL  | HALE             |
| 57  | ANGLE BOIT    | HM  | HALE             |
| 58  | ANGLE BOIT    | HN  | HALE             |
| 59  | ANGLE BOIT    | HO  | HALE             |
| 60  | ANGLE BOIT    | HP  | HALE             |
| 61  | ANGLE BOIT    | HQ  | HALE             |
| 62  | ANGLE BOIT    | HR  | HALE             |
| 63  | ANGLE BOIT    | HS  | HALE             |
| 64  | ANGLE BOIT    | HT  | HALE             |
| 65  | ANGLE BOIT    | HU  | HALE             |
| 66  | ANGLE BOIT    | HV  | HALE             |
| 67  | ANGLE BOIT    | HW  | HALE             |
| 68  | ANGLE BOIT    | HX  | HALE             |
| 69  | ANGLE BOIT    | HY  | HALE             |
| 70  | ANGLE BOIT    | HZ  | HALE             |
| 71  | ANGLE BOIT    | IA  | IALE             |
| 72  | ANGLE BOIT    | IB  | IALE             |
| 73  | ANGLE BOIT    | IC  | IALE             |
| 74  | ANGLE BOIT    | ID  | IALE             |
| 75  | ANGLE BOIT    | IE  | IALE             |
| 76  | ANGLE BOIT    | IF  | IALE             |
| 77  | ANGLE BOIT    | IG  | IALE             |
| 78  | ANGLE BOIT    | IH  | IALE             |
| 79  | ANGLE BOIT    | II  | IALE             |
| 80  | ANGLE BOIT    | IJ  | IALE             |
| 81  | ANGLE BOIT    | IK  | IALE             |
| 82  | ANGLE BOIT    | IL  | IALE             |
| 83  | ANGLE BOIT    | IM  | IALE             |
| 84  | ANGLE BOIT    | IN  | IALE             |
| 85  | ANGLE BOIT    | IO  | IALE             |
| 86  | ANGLE BOIT    | IP  | IALE             |
| 87  | ANGLE BOIT    | IQ  | IALE             |
| 88  | ANGLE BOIT    | IR  | IALE             |
| 89  | ANGLE BOIT    | IS  | IALE             |
| 90  | ANGLE BOIT    | IT  | IALE             |
| 91  | ANGLE BOIT    | IU  | IALE             |
| 92  | ANGLE BOIT    | IV  | IALE             |
| 93  | ANGLE BOIT    | IV  | IALE             |
| 94  | ANGLE BOIT    | IV  | IALE             |
| 95  | ANGLE BOIT    | IV  | IALE             |
| 96  | ANGLE BOIT    | IV  | IALE             |
| 97  | ANGLE BOIT    | IV  | IALE             |
| 98  | ANGLE BOIT    | IV  | IALE             |
| 99  | ANGLE BOIT    | IV  | IALE             |
| 100 | ANGLE BOIT    | IV  | IALE             |

#### GREEN BLDG. CODE NOTES

- A. MINIMUM SPACES AROUND PRESS. ELECTRIC CABLES, CONDUITS OR OTHER OPENINGS IN PLATES AT EXTERIOR WALL SHALL BE PROVIDED AGAINST THE PASSAGE OF ROBOTS BY ACCEPTABLE METHOD. (CBC Section 4.09.4.2)
- B. A MINIMUM OF 50 PERCENT OF CONSTRUCTION WASTE GENERATED AT THE SITE SHALL BE DIVERTED TO RECYCLE OR SALVAGE. (CBC Section 4.09.4.1)
- C. DUCT AND VENT OPENINGS SHALL BE COVERED DURING CONSTRUCTION. (CBC Section 4.09.4.1)
- D. ADHESIVES, SEALANTS AND GROUTS SHALL BE COMPLIANT WITH VOC AND OTHER TOXIC COMPOUND LIMITS. (CBC Section 4.09.4.2)
- E. PAINTS, STAINS AND OTHER COATINGS SHALL BE COMPLIANT WITH VOC LIMITS. (CBC Section 4.09.4.2)
- F. AEROSOL PAINTS AND COATINGS SHALL BE COMPLIANT WITH VOC LIMITS. (CBC Section 4.09.4.2)
- G. DOCUMENTATION SHALL BE PROVIDED TO VERIFY THAT COMPLIANT VOC LIMIT. (CBC Section 4.09.4.2)
- H. CARPET AND CARPET SYSTEMS SHALL BE COMPLIANT WITH VOC LIMITS. (CBC Section 4.09.4.2)
- I. 80 PERCENT OF FLOOR AREA RECEIVING RESIDENT FLOORING SHALL COMPLY WITH THE (CBC) HIGH PERFORMANCE PRODUCTS DATABASE OR COMPLIANT WITH CRI'S GREENLAB EVALUATION OF VOLATILE ORGANIC COMPOUND EMISSIONS FROM INDOOR SOURCES USING ENVIRONMENTAL CHAMBERS. (CBC Section 4.09.4.2)
- J. PATIENT ROOMS, MEDICAL OFFICES, FREESTANDING (UNIT) AND LABORATORY WARD USED IN INTERIOR FINISH SYSTEMS SHALL COMPLY WITH LOW FORMALDEHYDE EMISSION STANDARDS. (CBC Section 4.09.4.2)
- K. MOISTURE CONTENT OF BUILDING MATERIALS USED IN EXPOSED WALL AND FLOOR FRAMING IS TO BE MEASURED BEFORE ENCLOSURE AND CANNOT EXCEED 19% (CBC Section 4.09.4.2)
- L. HVAC SYSTEM INSTALLERS ARE TRAINED AND CERTIFIED IN THE PROPER INSTALLATION OF HVAC SYSTEMS. (CBC Section 7.2.2.1)

#### SYMBOLS



#### PROJECT DATA

|                          |                                                                                                                                     |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| PARCEL NUMBER:           | 009-322-003                                                                                                                         |
| JOB SITE ADDRESS:        | 1017 NORTH CRANE ROAD, SAINT HELENA, CA 94574                                                                                       |
| LOT AREA:                | 27 ACRES, 11,641 SQ FT                                                                                                              |
| BUILDING AREAS:          | 1312 SQ FT EXISTING, NO SF CHANGE<br>435 SQ FT EXISTING, NO SF CHANGE<br>122 SQ FT EXISTING, NO SF CHANGE<br>405 SQ FT NEW PROPOSED |
| NEW ACCESSORY STRUCTURE: |                                                                                                                                     |
| HEIGHT (15' MAX):        | 2274 SQ FT                                                                                                                          |
| WORK DESCRIPTION:        | SINGLE STORY, 126' TO RIDGE, 108' ROOF SLOPE                                                                                        |
| TYPE OF CONSTRUCTION:    | INTERIOR STRUCTURAL BEAM, SUPPORT AND WALL CHANGES                                                                                  |
| USE / OCCUPANCY:         | R-3                                                                                                                                 |
| ZONED AREA (S.I.):       | Medium Density Residential (MDR)                                                                                                    |
| ROOF LIVE LOAD:          | MAX GROSS SQ. F. / A.R. 3000 SQ FT                                                                                                  |
| FLOOR LIVE LOAD:         | 20 PSF                                                                                                                              |
| BASIC WIND SPEED:        | 110 MPH                                                                                                                             |
| EXPOSURE CATEGORY:       | B                                                                                                                                   |
| SEISMIC DESIGN CATEGORY: | D                                                                                                                                   |
| BASE SHEAR:              | 4.88 KIPS, NO CHANGE                                                                                                                |
| FEMA FLOOD ZONE:         | ZONE X                                                                                                                              |
| FIRE HAZARD SEVERITY:    | NONE                                                                                                                                |
| SPRINKLER:               | NONE                                                                                                                                |
| SPECIAL INSPECTIONS:     | STRUCTURAL, WOOD                                                                                                                    |

#### VICINITY MAP



#### SHEET INDEX

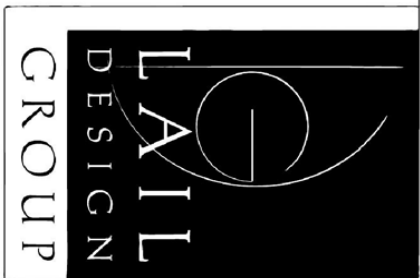
|               |                          |
|---------------|--------------------------|
| ARCHITECTURAL | INFORMATION SHEET        |
| B-0.1         | SITE PLAN FLOOR PLAN     |
| B-2.0         | ELEVATIONS SECTION       |
| B-3.0         | DETAILS                  |
| STRUCTURAL    | GENERAL STRUCTURAL NOTES |
| S-1           | STRUCTURAL PLANS         |
| S-2           | STRUCTURAL DETAILS       |
| S-3           | STRUCTURAL DETAILS       |

#### DIRECTORY

|                           |                             |
|---------------------------|-----------------------------|
| OWNER:                    | ARCHITECT REPRESENTATIVE:   |
| MS. CHARLOTTE TEMPLE      | LAL DESIGN GROUP            |
| 1017 NORTH CRANE ROAD     | 1127 POPE STREET, SUITE 106 |
| SAINT HELENA, CA 94574    | PHONE: (707) 963-1565       |
| CONTACT: CHARLOTTE TEMPLE | FAX: (707) 963-4609         |
| EMAIL: CTEMPLE@GMAIL.COM  | EMAIL: DAVID@HAWAII.COM     |
| STRUCTURAL ENGINEER:      | CONTRACTOR:                 |
| JUAN ESCOBEDO, CAP604     | OWNER CONTRACTOR            |
| 1280 JEFFERSON STREET     | 1017 NORTH CRANE ROAD       |
| SAINT HELENA, CA 94574    | PHONE: (707) 963-1565       |
| FAX: (707) 228-4470       | FAX: (707) 963-4609         |
| EMAIL: JESCOB@GMAIL.COM   | EMAIL: JESCOB@GMAIL.COM     |

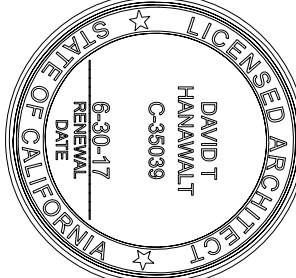
#### DEFERRED SUBMITTALS

UNDER SEPARATE PERMIT (SUBMIT FIRE SUPPRESSION LAYOUT TO FIRE DEPARTMENT FOR PLAN CHECK)



1127 Pope Street, Suite 106  
Saint Helena, CA 94574  
TEL: 707 963 1565 FAX: 707 963 4609

David Hanawalt AIA  
PROJECT ARCHITECT



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#### TEMPLE SHED ACCESSORY STRUCTURE- ARCHIVE

|                |            |
|----------------|------------|
| PROJECT NUMBER | 478        |
| DATE           | 12/15/2016 |
| CHECKED BY     | JL         |
| DRAWN BY       | DPH        |
| SCALE          | AS NOTED   |
| REVISIONS      |            |

1017 NORTH CRANE ROAD  
ST. HELENA, CALIFORNIA  
APN: 009-322-003

#### TITLE SHEET

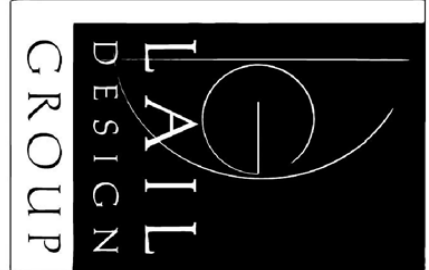
#### B-0.1

PERMIT SUBMITTAL



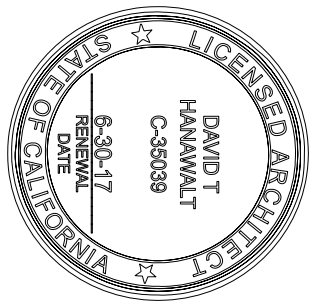






1127 Pope Street, Suite 106  
Saint Helena, CA 94574  
TEL 707 963 1555 FAX 707 963 4599

**David Hanawalt AIA**  
PROJECT ARCHITECT



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**TEMPLE  
SHED  
ACCESSORY  
STRUCTURE-  
ARCHIVE**

1017 NORTH ORANGE ROAD  
ST. HELENA, CALIFORNIA  
APN: 009-322-003

|                |            |
|----------------|------------|
| PROJECT NUMBER | 476        |
| DATE           | 12/15/2016 |
| CHECKED BY     | JLH        |
| DRAWN BY       | DTH        |
| SCALE          | AS NOTED   |

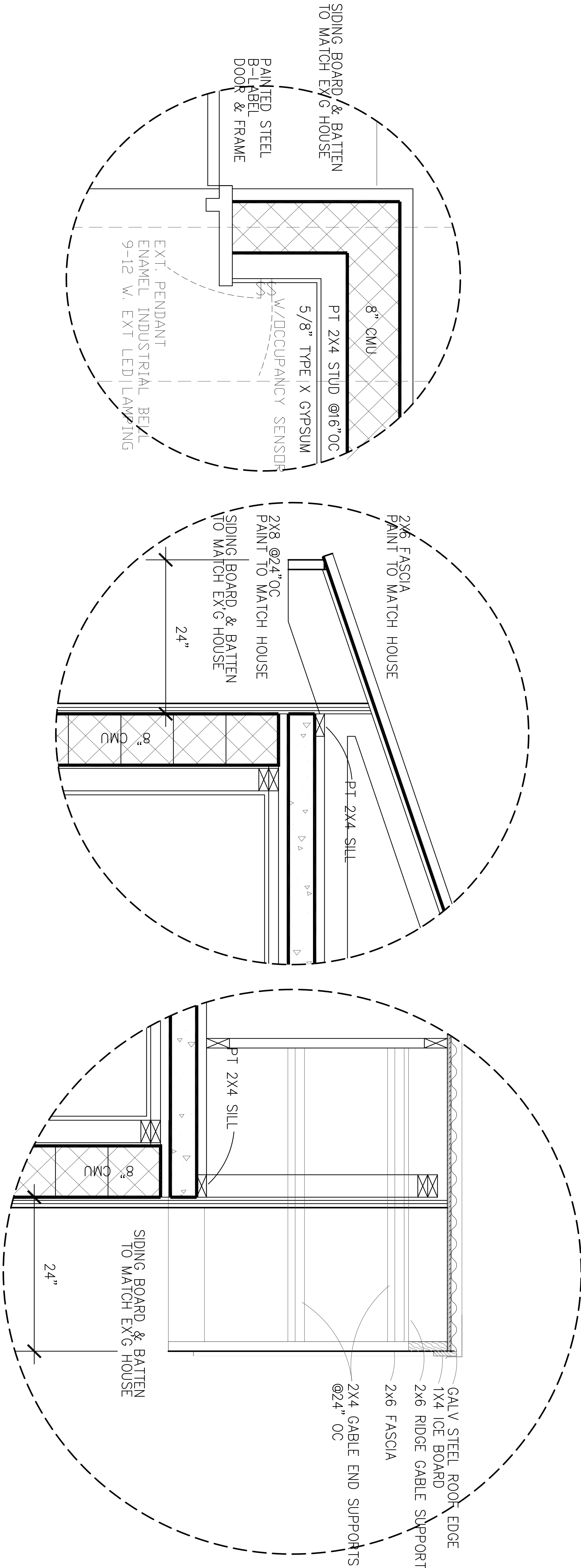
REVISIONS

|   |        |
|---|--------|
| △ | XXXXXX |
|---|--------|

DETAILS

**B-3.0**

PERMIT SUBMITTAL



1 WALL DETAIL  
1'-1 1/2" = 1'-0"

2 EAVE DETAIL  
1'-1 1/2" = 1'-0"

3 GABLE END DETAIL  
1'-1 1/2" = 1'-0"

RECEIVED  
PLANNING DEPARTMENT

JAN 06 2016

City of St. Helena

## Project Statement- Accessory Shed

Charlotte Temple, 1017 North Crane Avenue

apn: 009-322-003

This proposed project is for addition of an accessory structure in the rearyard of existing Residential single family, single story house (SB construction) in MR zoned district of City of St. Helena. Charlotte Temple, Owner, proposes to build an accessory fireproof photography storage shed measuring 15' x 27' in plan and 12'-8" from grade to the top of the roof vent strip. A fire rated exterior double door along the driveway side will have concrete impervious paving, an outdoor LED 'nightsky' type service light and the placement of the new structure will require the removal of two 2" caliper olive trees.

We are working with Juan Escudero, Structural Engineer (lic#35404) to provide structural analysis and details for the structure. To make the structure fireproof, it will have concrete block walls, concrete slab on grade and a concrete slab over the top with added wood gable truss to match the existing house slope and exterior roofing finishes. The exterior walls will be sided to match the house exterior finishes with matching eaves and paint.

Mechanical systems will include a Daikin Quaternity mini split heat pump with humidity control and a fresh air intake on a continuous operating Panasonic WhisperComfort energy recovery ventilator. To keep the structure fireproof, the doors will be fire rated, the ducted air intake and exhaust will have intumescent fire sealing properties. The structure may also include a fire suppression system using Halon or other "dry" type systems to be designed/specified/installed and permitted by other (not part of this permit). There will be no water supply or waste line for the structure.

### Planning Exemption request:

As the accessory shed is a permitted use in the (MR) Medium Density Residential districts, and the structure is proposed for a backyard location not visible from the public street and compliant with listed setback requirements for accessory structures, we are applying for a design review exemption. As provided in 17.164.060 Exemptions, the proposed design as presented:

- a) 17.164.010 provides no problems for planning goals to not harm neighbors in the form of public views or public spaces, and no significant views over private fences into Ms. Temple's backyard.  
17.164.030 provides no problems for planning goals to not harm the residential district by allowing a non-permitted use, because the accessory use is permitted (17.40.020-H). The proposed structure is scaled to be smaller than the house and guest house, while using the same roof angles, roof overhang details and exterior materials and finishes. It does not impose in any way on other structures, nor the surrounding neighborhood area and minimizes changes to existing internal landscape elements and no effect on external landscape elements. The proposed structure has no water supply or wastewater. The mechanical system proposed to maintain steady indoor temperature and humidity for photography archive is the most efficient unit ever rated in the category by EnergyStar
- b) 17.164.020 is consistent with planning goals in bringing value to the community, fostering an attractive arrangement of residential use, preserving heritage and character (a photography

archive in service of this goal), and generally raising the community expectations for a quality environment through visual sensibility/acuity.

17.164.030 is consistent with planning goals in scale, detail, material and finishes, preserves landscape elements, uses no water and proposes to use an extraordinarily efficient mechanical system for energy conservation. It is also designed to be fireproof and in that sense, confers minimum fire risk to adjacent properties.

Please contact me via phone or email with questions or for clarifications.

Sincerely,

A handwritten signature in black ink, appearing to read 'David Hanawalt', with a long horizontal line extending to the right.

David Hanawalt AIA  
Architect CA #35039  
Lail Design Group

**CITY OF ST. HELENA  
PLANNING DEPARTMENT 1480 MAIN STREET- ST. HELENA, CA 94574  
PLANNING COMMISSION**

**March 7, 2017**

**AGENDA SECTION:** CONSENT CALENDAR

**AGENDA ITEM:**

**FILE NUMBER:** PL16-096

**SUBJECT:** Design Review Exemption for Harold Smith & Sons Concrete Reclaimer Replacement

**PREPARED BY:** Noah Housh, Planning Director

**REVIEWED BY:** Noah Housh, Planning Director

**APPLICATION FILED:** 12.06.16

**ACCEPTED AS COMPLETE:** 1.5.17

**LOCATION OF PROPERTY:** 800 Crane Avenue, St.Helena, CA 94574

**APPLICANT:** Pam Raybould      **PHONE:** 1(707) 963-7977

**APN:** 009-280-040

**GENERAL PLAN/ZONING:** I:Industrial

**PROPERTY DESCRIPTION:**

The subject property is an industrial lot of approximately 11.67 acres. The site supports an existing non-conforming (in that the business pre-dates the requirement for a use permit to operate) general engineering and construction operation that produces and stores ready mix concrete, landscaping material, sand, and gravel. The subject site is traversed by Sulphur Springs Creek.

**PROJECT DESCRIPTION:**

Applicant, Pam Raybould, is requesting a retroactive Design Review Exemption to authorize replacement of the existing rapid concrete reclaimer with a new concrete reclaimer of substantially the same size and processing capacity. The rapid concrete reclaimer serves as a component of the site's reclamation plan required under a July 1999 Cleanup and Abatement Order Number 99-016 issued by the California Regional Water Quality Control Board. The basic purpose of the reclaimer is to allow un-used cementitious material to be reclaimed from the equipment, improving the process and discarded process water quality.

The original reclaimer processed 20-30 truck rinse outs per day and processed 8-10 cubic yards of returned concrete per day; however, it was found that the original

800 Crane Avenue  
Design Review Exemption  
Harold Smith and Sons Concrete Reclaimer Replacement  
March 7, 2017



concrete reclaimer could not effectively remove aggregates in a way that they could be re-used. As such, the applicant is requesting a design review exemption to retroactively authorize the replacement of the original concrete reclaimer. Portions of the reclaimer equipment were replaced without the benefit of a permit or approval of the required Design Review Exemption. In addition to the equipment, the applicant is requesting approval to construct an open air, shed roof over the proposed equipment. This structure is over an existing impermeable surface and is below the maximum height of 15-feet allowed for accessory structures.

According to the applicant and as detailed in the project narrative (**Attachment 4**), the replacement reclaimer will process the same level of waste per day (20-30 truck rinses per day and process 8-10 cubic yards of returned concrete). The new reclaimer will be of substantially the same size and capacity, but would be relocated to the drying pit area and partially situated below natural grade so as to allow trucks to back into it. Reclaimed water will continue to be used by the reclaimer and as such, no net change in potable water use is expected.

## **ANALYSIS**

### **GENERAL PLAN**

The Industrial Land Use Designation provides for industrial parks, warehouses, light manufacturing, auto and farm related equipment sales and repairs, viticulture support services, and similar and compatible uses. This designation is found in two locations within the City: The area along Sulphur Springs Creek between Highway 29 and Valleyview Street (the subject site) and an area east of Highway 29 and south of Mills Lane.

Given that the project consists of in-kind replacement of existing machinery with no change or expansion in the existing use, the project proposal does not include any component that would be in conflict with the Industrial land use designation.

### **ZONING**

Consistent with the General Plan Designation, the Industrial (I) zoning district provides for industrial parks, warehouses, light manufacturing, auto and farm-related equipment sales and repairs, etc.. Under the Industrial Zoning Designation, "lumber and building materials yards" are conditionally allowed. Given that Harold Smith and Sons has been in operation at this site since 1917 and prior to the introduction of current zoning requirements (use permit requirements appear to have been required as early as the 1940s), the operation is considered a "legal non-conforming use." A legal non-conforming use is a legally established use of land which is not permitted in the zoning district in which it is located, or a use which is permitted by use permit but for which no use permit has been obtained, because the use was established prior to the use permit regulations of the zoning ordinance.

As detailed under St. Helena Municipal Code Section 17.140, land uses that are categorized as "legal non-conforming uses" may be continued indefinitely, subject to the provisions of Code Section 17.140, but shall not be permitted to expand operation or enlarge floor area. Consistent with the Code requirements, the proposal to replace the

800 Crane Avenue  
Design Review Exemption  
Harold Smith and Sons Concrete Reclaimer Replacement  
March 7, 2017

existing reclaimer will be in generally the same location as the original reclaimer and of substantially the same size and capacity and therefore, and therefore will not result in an expansion of use or otherwise conflict with any requirements enumerated under Code Section 17.140. The replacement reclaimer will measure 15' in height and features setbacks of over 100-feet from each property line.

#### **CEQA**

The project is categorically exempt in accordance with CEQA Section 15302 "Replacement or Reconstruction" as the replacement of a commercial structure with a new structure of substantially the same size, purpose, and capacity.

#### **WATER NEUTRALITY**

In August 2015 and pursuant to Ordinance 2015-5 the City of St. Helena established mandatory water efficiency measures for new construction, and adopted water demand offset requirements enumerated in Chapter 13.12.050 of the Municipal Code. Amongst these provisions is the requirement that any "new development" (i.e. construction that would introduce any freestanding building that contains water-using fixtures, any floor area additions to existing nonresidential structures, or any residential additions or remodeling that increases the number of independent living units) offset new demand by an amount of water equal to the new demand placed on the city water system using the methodology defined in Code section 13.12.050. The offset must be clearly demonstrated to the satisfaction of the Director of Public Works.

The new concrete reclaimer will continue to utilize reclaimed water and therefore is not expected to generate a net increase in water use. Accordingly, the proposed project would not be in conflict with any of the provisions of the water neutrality requirements (**Attachment 6**).

#### **DESIGN REVIEW**

The purpose of design review is to, amongst other things, promote the qualities that bring value to the community and foster attractiveness and functional utility of the community as a place to live and work. To approve design review, the Commission must find that the project is consistent with the design criteria prescribed by Section 17.164.030 and exhibits a quality of design that is compatible with adjacent development, features a siting, scale, massing and architectural style that is generally consistent with the predominant development patterns and that does not otherwise detract or negatively affect the established character of the surrounding neighborhood.

The approximately 11 acre site is distinct from the surrounding area given that it serves as one of only two industrial areas within the City. As an industrial site, the Harold Smith and Sons operation favors functionality over aesthetics. The proposed replacement reclaimer will be very similar to the existing reclaimer in size and scale and will not cause a deviation in the established industrial character of the site. Further, it will be located in generally the same location as the existing reclaimer and clustered with other industrial equipment components onsite. As such, the proposed replacement in-kind of the concrete reclaimer is expected to be consistent with all design review criterion enumerated below.

800 Crane Avenue  
Design Review Exemption  
Harold Smith and Sons Concrete Reclaimer Replacement  
March 7, 2017

Design Criteria

1. Consistency and compatibility with applicable elements of the general plan;
2. Compatibility of design with the immediate environment of the site;
3. Relationship of the design to the site;
4. Determination that the design is compatible in areas considered by the board as having a unified design or historical character;
5. Whether the design promotes harmonious transition in scale and character in areas between different designated land uses;
6. Compatibility with future construction both on and off the site;
7. Whether the architectural design of structures and their materials and colors are appropriate to the function of the project;
8. Whether the planning and siting of the various functions and buildings on the site create an internal sense of order and provide a desirable environment for occupants, visitors and the general community;
9. Whether the amount and arrangement of open space and landscaping are appropriate to the design and the function of the structures;
10. Whether sufficient ancillary functions are provided to support the main functions of the project and whether they are compatible with the project's design concept;
11. Whether access to the property and circulation systems are safe and convenient for pedestrians, cyclists and vehicles;
12. Whether natural features are appropriately preserved and integrated with the project;
13. Whether the materials, textures, colors and details of construction are an appropriate expression of its design concept and function and whether they are compatible with the adjacent and neighboring structure and functions;
14. In areas considered by the board as having a unified design character or historical character, whether the design is compatible with such character;
15. Whether the landscape design concept for the site, as shown by the relationship of plant masses, open space, scale, plant forms and foliage textures and colors create a desirable and functional environment and whether the landscape concept depicts an appropriate unity with the various buildings on the site;
16. Whether plant material is suitable and adaptable to the site, capable of being properly maintained on the site, and is of a variety which is suitable to the climate of St. Helena;
17. Whether sustainability and climate protection are promoted through the use of green building practices such as appropriate site/architectural design, use of green building materials, energy efficient systems and water efficient landscape materials.

800 Crane Avenue  
Design Review Exemption  
Harold Smith and Sons Concrete Reclaimer Replacement  
March 7, 2017

### **CORRESPONDENCE**

No comments have been received at the drafting of this staff report.

### **ISSUES**

Harrold Smith and Sons does not operate under a use permit, rather they are anon-conforming business. Based on this, no approval may authorize any expansions or other intensification in their use, unless a use permit is filed requesting to expand the non-confirming business. Therefore, any improvements to the business must not expand the current prodcuton capacity.

Staff has reviewed the proposed equipment, as compared with the existing equipment and finds that the overall concrete prodcuton of the business will not increase through the installation of the proposed equipment. Rather, the existing prodcuton levels will become more efficient in their use of water and ability to recycle concrete paste.

### **STAFF RECOMMENDATION**

The Planning and Community Improvement Department recommends that the Planning Commission:

1. Determine that the project is categorically exempt from the requirements of CEQA pursuant to CEQA Section 15302 "Replacement or Reconstruction" as the replacement of a commercial structure with a new structure of substantially the same size, purpose, and capacity.
2. Accept the required findings enumerated in Municipal Code Section 17.164.030 and adopt a resolution approving a Design Review Exemption for the proposed Harold Smith and Sons Concrete Reclaimer Replacement project.

### **ATTACHMENTS**

- 1.Resolution
- 2.APN Map
- 3.Aerial View
- 4.Project Narrative
- 5.Project plans, date stamped 12.6.16

800 Crane Avenue  
Design Review Exemption  
Harold Smith and Sons Concrete Reclaimer Replacement  
March 7, 2017



**CITY OF ST. HELENA PLANNING COMMISSION**

**RESOLUTION PC20xx-xx**

**RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF ST. HELENA  
GRANTING APPROVAL OF A DESIGN REVIEW EXEMPTION  
FOR THE HAROLD SMITH AND SONS CONCRETE RECLAIMER REPLACEMENT  
PROJECT LOCATED AT 800 CRANE AVENUE**

**PROPERTY OWNER:** Pam Raybould

**APN:** 009-280-040

**Recitals**

- A. Whereas,** Pam Raybould submitted an application for retroactive Design Review approval to replace an existing concrete reclaimer of substantially the same size and capacity as that previously existing and located at 800 Crane Avenue in the (I) Industrial Zoning District; and
- B. Whereas,** the Planning Commission of the City of St. Helena, State of California, considered the project, staff report, and all testimony, written and spoken, at a duly noticed public hearing on March 7, 2017.
- C. Now, therefore** let it be found that, the Planning Commission approves the requested Design Review Exemption on the following basis:

**Resolution**

- A.** The Planning Commission hereby finds that this project qualifies for a Class 2 Categorical Exemption pursuant to Section 15302, of the California Environmental Quality Act (CEQA).
- B.** The Planning Commission has considered the Design Review criteria identified in Municipal Code Section 17.164.030 to support the motion to approve the Design Review Exemption given that the project has been found to be substantially similar in size, capacity, and siting to the previously existing concrete reclaimer and would not depart from the established industrial character of the site and therefore demonstrates the following:
1. Consistency and compatibility with applicable elements of the general plan in that the project maintains the standards for lot sizes and development, identified in the Agriculture designation;
  2. Compatibility of design with the immediate environment of the site given that the design maintains historic design features and materials;
  3. Relationship of the design to the site given the scale of the addition, the proposed setbacks and the context of the neighborhood;

4. Determination that the design is compatible in areas considered by the Commission as having a unified design or historical character given the historic scale and design features incorporated into the proposal;
5. Whether the design promotes harmonious transition in scale and character in areas between different designated land use given the surrounding agricultural properties;
6. Compatibility with future construction both on and off the site given the access, context and historic nature of the surrounding neighborhood;
7. Whether the architectural design of structures and their materials and colors are appropriate to the function of the project providing appropriate design elements and exterior features;
8. Whether the planning and siting of the various functions and buildings on the site create an internal sense of order and provide a desirable environment for occupants, visitors and the general community which the project does through appropriate setbacks and thoughtful site planning;
9. Whether the amount and arrangement of open space and landscaping are appropriate to the design and the function of the structures which they are given the provided site plan, setback and landscaping proposed;
10. Whether sufficient ancillary functions are provided to support the main functions of the project and whether they are compatible with the project's design concept which the outdoor decks, pool and rear yard arbor are found to be;
11. Whether access to the property and circulation systems are safe and convenient for pedestrians, cyclists and vehicles which they are given the continuation of the single family use and maintenance of the existing access to the property;
12. Whether natural features are appropriately preserved and integrated with the project which the project seeks to do through careful site planning;
13. Whether the materials, textures, colors and details of construction are an appropriate expression of its design concept and function and whether they are compatible with the adjacent and neighboring structure and functions which they are given the historic design themes and elements;
14. In areas considered by the board as having a unified design character or historical character, whether the design is compatible with such character which the design is found to be, given the features and elements referenced above;
15. Whether the landscape design concept for the site, as shown by the relationship of plant masses, open space, scale, plant forms and foliage textures and colors create a desirable and functional environment and whether the landscape concept depicts an appropriate unity with the various buildings on the site which it does through careful and appropriate planting choices and locations;

16. Whether plant material is suitable and adaptable to the site, capable of being properly maintained on the site, and is of a variety which is suitable to the climate of St. Helena, which it is given the drought tolerant elements proposed;
17. Whether sustainability and climate protection are promoted through the use of green building practices such as appropriate site/architectural design, use of green building materials, energy efficient systems and water efficient landscape materials which is, based on the significant energy and water saving requirements of the California Building Code and City of St Helena development criteria

**D.** Now therefore be it further resolved that, the Design Review for the above described project is granted subject to compliance with all applicable provisions of the Zoning Code subject to each of the following conditions. Permit shall be in conformance with all City ordinances, rules, regulations and policies in effect at the time of issuance of a building permit. The conditions noted below are particularly pertinent to this permit and shall not be construed to permit violation of other laws and policies not so listed.

#### CONDITIONS OF APPROVAL

1. The Design Review shall be vested within one (1) year from the date of approval. A building permit for the use allowed under this approval shall have been obtained within one (1) year from the effective date of the Design Review decision or these approvals shall expire; provided however that the approved Design Review may be extended for up to two (2) one-year periods pursuant to the St. Helena Municipal Code, Section 17.08.030, Extension of Permits and Approvals.
2. This permit is valid for this design only and does not permit any expansion of the existing use, production capacity or any other activities deemed by the City to be an expansion of the non-conforming land use. New permits must be applied for any change in use. These permits will expire if the use is discontinued pursuant to then existing ordinances and regulations.
3. The Design Review shall not become effective until fourteen (14) calendar days after approval, providing that the action is not appealed by the City Council or any other interested party within that 14 day period.
4. Any request for an extension of the Design Review must be justified in writing and received by the Planning Department at least thirty (30) days prior to expiration.
5. All required fees, including planning fees, development impact fees, building fees, retrofit fees, and St. Helena Unified School District fees shall be paid prior to issuance of building permit.
6. Compliance with all permit conditions shall be clearly identified on all plans submitted for building permit approval, shall occur in accordance with specific regulations but in all cases no later than prior to occupancy or initiation of use unless another time is set



by law or by this approval. Occupancy or final inspection of a project may be withheld if all conditions, including payment of fees for services rendered by the City, are not met.

7. The applicant will defend and indemnify and hold the City, its agents, officers, and employees harmless of any claim, action or proceedings to attack, set aside, void or annul an approval so long as the City promptly notifies the applicant of any such claim, action, or proceedings and the City cooperates fully in the defense of the action or proceedings.
8. Provided they are in general compliance with the approved Design Review, minor modifications found to be in substantial conformance with the approved design may be approved by the Planning Director.
9. This Design Review shall run with the land and shall be binding upon all parties having any right, title or interest in the real property or any part thereof, their heirs, successors and assigns, and shall inure to their benefit and benefit of the City of St. Helena.
10. The primary purpose of this review is for compliance with the General Plan and Zoning Ordinance. The owner/applicant is responsible for meeting with the Building Official / Fire Inspector to review compliance with Building and Fire Codes, including fire protection systems and the accessibility standards of Title 24.
11. Construction documents shall be in compliance with approved plans and exhibits.
12. This action approves the installation of new concrete reclaimer equipment and a shed roof over this equipment with a maximum height of 15-feet.

#### **Public Works Department Conditions of Approval**

13. Approval of this project shall be subject to the requirements of, and all improvements shall be designed and constructed in accordance with, the most current version at the time of improvement plan submittal, Caltrans Standards and Specifications, the City of St. Helena Municipal Code, the St. Helena Water and Sewer Standards, the St. Helena Street, Storm Drain and Sidewalk Standards, and all current federal, state and county codes governing such improvements.
14. The applicant shall repair all public improvements that are damaged by the construction process in accordance with the City Water/Sewer/Street/Storm Drain/Sidewalk Standards prior to Certificate of Occupancy.

#### **Fire Department Conditions of Approval**

15. One hour minimum fire resistant construction may be required on all exterior walls of other structures within 10' of property boundary. Fire resistant construction of interior walls shall be determined by type of occupancy.

#### **Building Department Conditions of Approval**

16. A building permit is required for all onsite demolition, construction and/or change of occupancy.
17. The applicant will be required to comply with the codes adopted at the time the applicant applies for a building permit. At this time the City of St. Helena utilizes the 2013 Title 24 codes however the 2016 Title 24 codes go into effect January 1, 2017.
18. When submitting plans for a building permit, the plans shall include all documentation listed on the building permit application checklist.
19. The applicant shall provide a construction waste management plan with the building permit application.
20. The plans for construction shall include a checklist for compliance with the California Green Buildings Standards Code, mandatory measures. Provide a reference on the checklist indicating where the mandatory measures can be found on the plans.
21. When submitting plans, the title page shall include all information referenced on the building permit application checklist Title Page requirements.
22. Building Permit application materials and plans shall include any documentation pertaining to special loads applicable to the design and the specified section of the code that addresses the condition; special inspections for any systems or components requiring special inspection; requirements for seismic resistance; and a complete list of deferred submittals at time of application. Any deferral of the required submittal items shall have prior approval of the Building Official however deferral of fire sprinkler design is not allowed.
23. Properties which are on septic systems and proposing substantial renovations may require approval from the Napa County Environmental Health Department. Applicants are encouraged to engage with the County early in the building permit review process to reduce the potential for delay.

**I HEREBY CERTIFY** that the foregoing Design Review was duly and regularly approved by the Planning Commission of the City of St. Helena at a regular meeting of said Planning Commission held on March 7, 2017, by the following roll call vote:

**AYES:**

**NOES:**

**ABSENT:**

**ABSTAIN:**

APPROVED:

ATTEST:

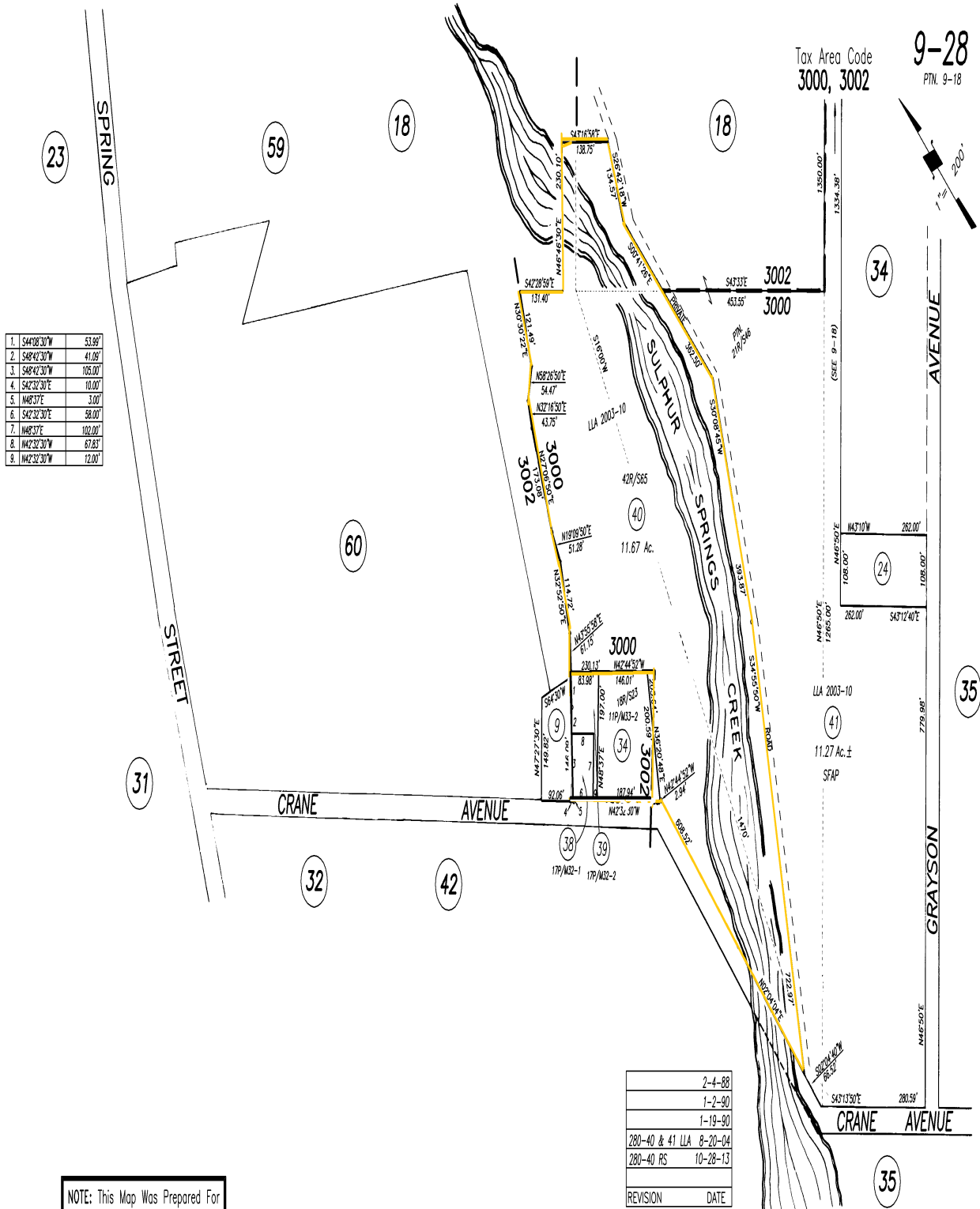
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Grace Kistner  
Chair, Planning Commission

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Noah Housh,  
Planning and Community  
Improvement Director

















Noah Housh  
Darrell Mayes  
City of St. Helena  
1480 Main St.  
St. Helena, CA 94574

## GENERAL ENGINEERING CONTRACTORS

POST OFFICE BOX 232 • ST. HELENA, CA 94574 • PHONE (707) 963-7977 • FAX (707) 963-2029  
March 18, 2016

RECEIVED  
PLANNING DEPARTMENT

DEC 06 2016

City of St. Helena

RE: Reclaimer Installation

Dear Noah and Darrell:

Thank you for meeting with John and Bob this week at your office. In order to understand this equipment you need to have the information about why we have this reclaimer. In 1999 Harold Smith & Son, Inc. purchased a Rapid Concrete Reclaimer Model RCR 210MKII from Dave Humphrey Enterprise, in order to help with our reclamation plan and to keep from depositing contaminated water into the creek and surrounding areas. This plan had come into existence due a July 1999 Cleanup and Abatement Order no. 99-016 copy attached, issued to Harold Smith by State Of California Regional Water Quality Control Board. In our reclamation plan it clearly calls out for the use of a reclaimer.

What this machine does is to take the waste wash water and ready mix that is still in the truck and separates the sand and rock and puts it in a stock pile it then pumps out the water and cement paste. The water and cement paste are further separated by the filter press that removes all the contaminated water from the cement paste so it can dry properly and be disposed of properly. That leaves the water so we can treat the water to make sure that it is the proper ph and has no concrete solids in it for reuse in our concrete.

The new reclaimer handles the same waste and is designed to process 20-30 truck rinse outs per day and process 8 – 10 cubic yards of returned concrete per day. These are the same parameters as we had on our Rapid reclaimer. We have tried to find print out information but this company no longer deals in these reclaimers and due to its age there is limited info. We also intend to use the same containments ponds to treat and handle the water as we have used since the remodel in 1999.

I also wanted to let you know that Bob is working on the layout for you and should have something to you early next week. Should you have any questions please feel free to contact us. Thank you,

Sincerely,

  
Pam Raybould  
President





## GENERAL ENGINEERING CONTRACTORS

POST OFFICE BOX 232 • ST. HELENA, CA 94574 • PHONE (707) 963-7977 • FAX (707) 963-2029

### Scope of work for Replacement of Recycling Plant

Originally installed in early 2000's

Planned Replacement date 2016

- 1) As you can see by files back in 1999 we purchased our first Rapid Reclaimer MK11 and installed it without the need for design review per Jerry Cormack. The Reclaimer is how we have to process our waste product that returns from a readymix job. The old reclaimer was rated as being able to process this waste at 27 cubic yards per hr. It used 90 gallons of water per minute to accomplish this task (See Spec. sheet attached. Item #1).
- 2) 3-11,000 gallon ponds were built and the grade was changed to have all the process water (rain fall included) that were produced in the process triangle to run into the ponds to be separated using a systems of weirs and settlement (See drawing from purchase of machine. Item #2). The system was developed with the theory to pump the cement paste back into the truck loading. One of the problems encountered was that for every 6 sacks of cement paste retained required us to produce 45 yards of concrete to get rid of. Our experience showed that we average 8-10 yards of returned concrete per day. The system couldn't handle the amount of paste being returned and the reclaimer wasn't doing a sufficient job of cleaning to aggregates to be able to reuse them. We then had to put the waste material in a drying pond area and dry it out enough to be hauled off to the dump. In 2007 we started searching for a better way to reclaim the returned waste.

#### Information below for Reclaimer #2:

- 1) We choose to purchase a model KPI-JCI model no. 5036-25S, serial no. 413418 reclaimer screw, capable of washing 60,000# 30TPH or 15 yds per hour, using 360 gallons of water per minute to process the material (See attached work sheet Item #3. The water will be pumped from the existing ponds into the reclaimer screw. We will be removing the existing 8 hp pump in pond #3 and replacing it with a 10 hp pump. We will use some of the existing plumbing to direct the flow from pond 3 to the reclaimer, the slurry water will exit the reclaimer into a 3,000 gallon slurry tank where it will be pumped by a new 20 hp slurry pump into a separation tank where the paste will settle down to the bottom. It will then be pumped to the filter press where the paste will be dewatered and pressed into dry cakes to be recycled or hauled off to the dump.
- 2) Clean out remaining concrete waste from drying pit removal of approx. total material removed 162 yards to recess the reclaimer down to truck level
- 3) Rebar installation and concrete work performed on the following items:

Footings #5 12 inch centers with an additional cage.

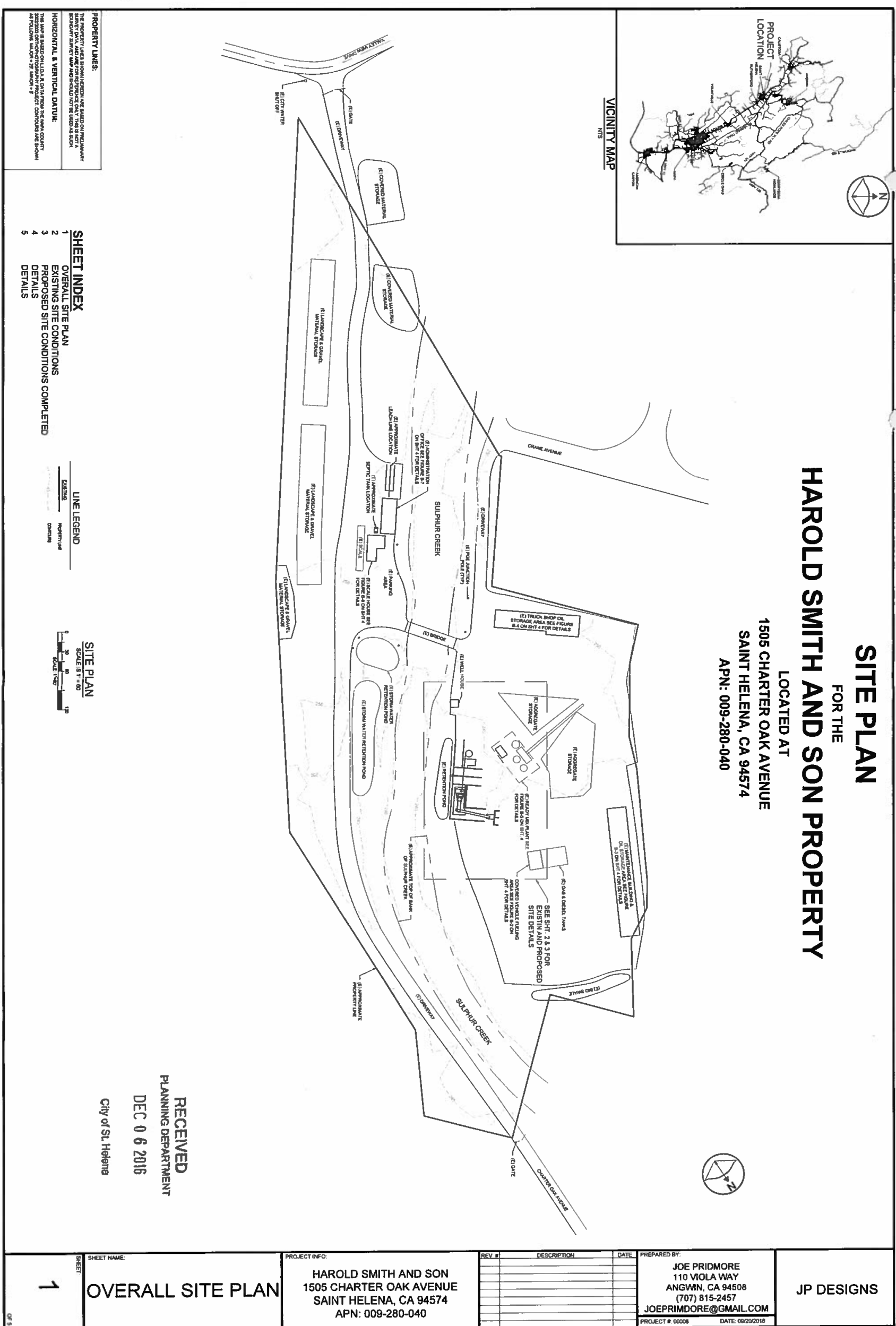
Flooring #5 12 inch centers two mates.

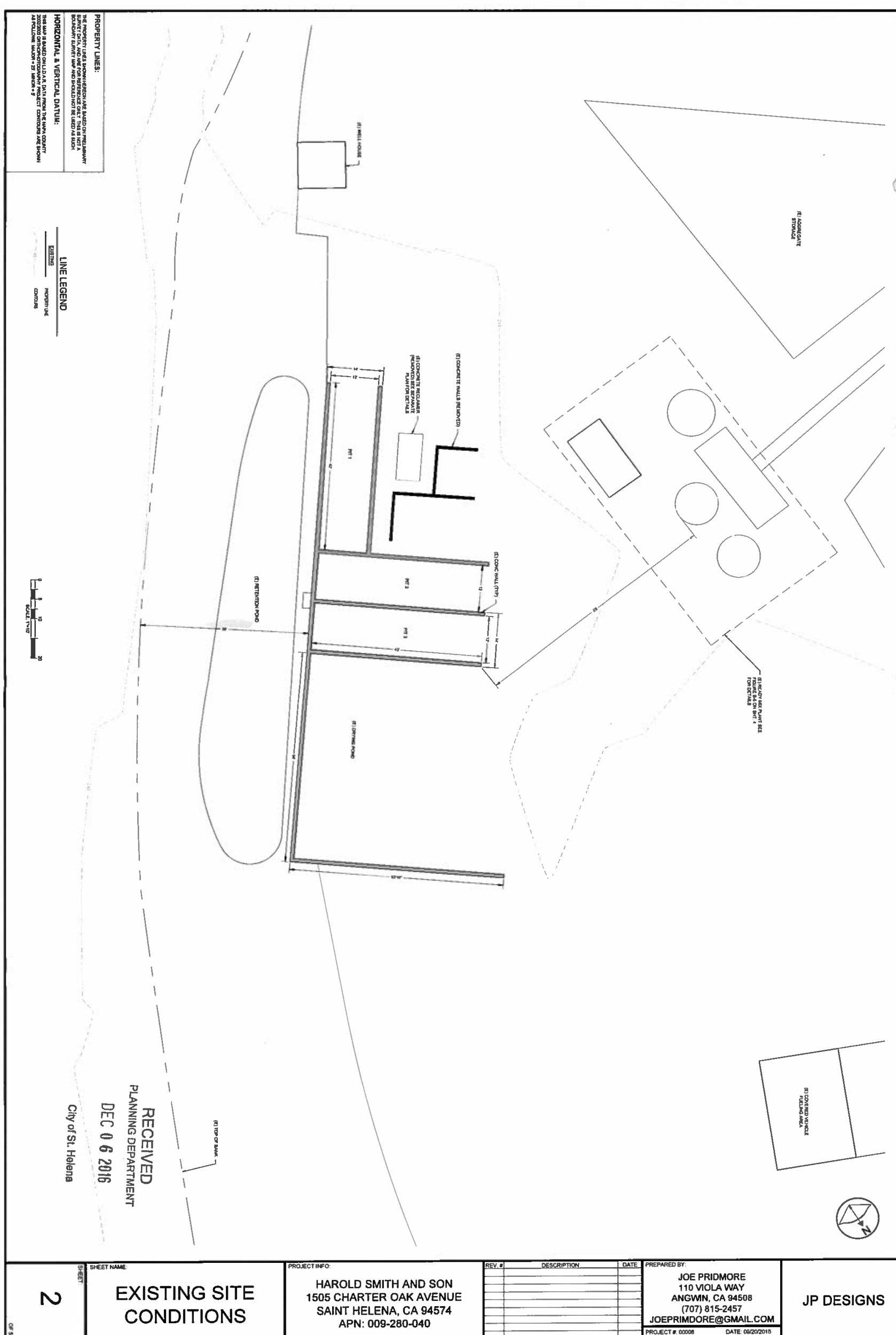
Walls #5 12 inch centers (please see drawings).

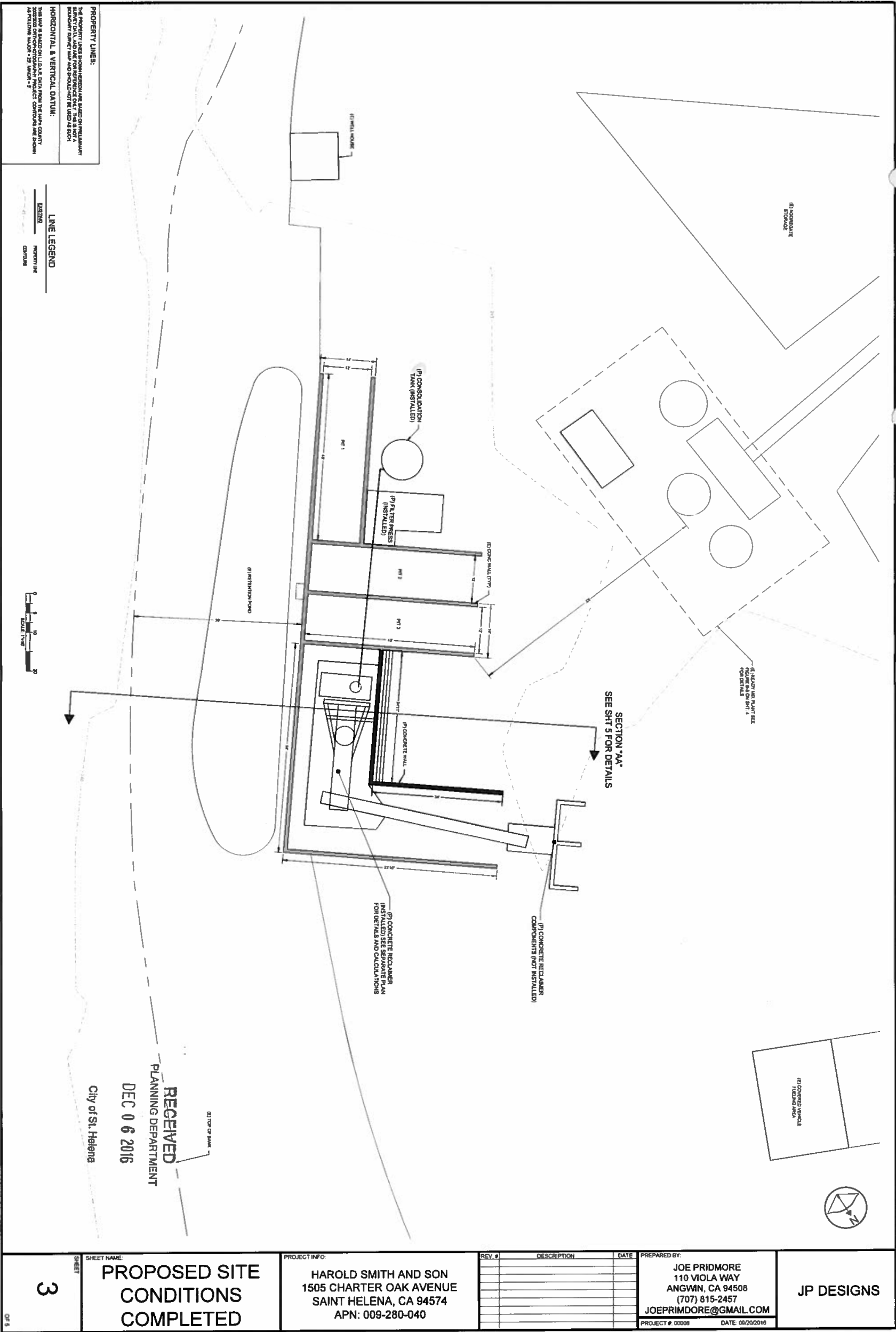
We had our customer do a mock up of their work to show to their prospective customers. This customer is licensed contractor in this field. There was no charge for this work.

Scope of work to remove old reclaimer done back before 2008 as it had stopped working and was just in the way. Move location of new reclaimer to drying pit area and recess the reclaimer down to allow the trucks to back to it. Electrical and plumbing will be updated to current building codes. All work done by licensed contractors.



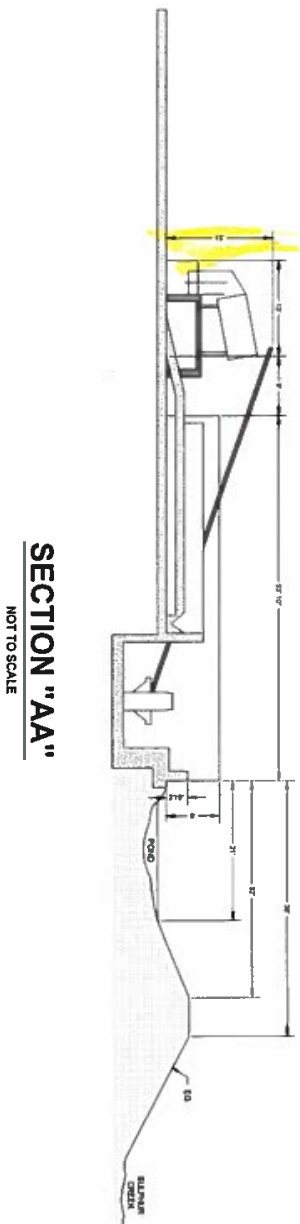












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|   |       |                            |                                                                                                                   |       |             |      |                                                                                                                 |                 |            |
|---|-------|----------------------------|-------------------------------------------------------------------------------------------------------------------|-------|-------------|------|-----------------------------------------------------------------------------------------------------------------|-----------------|------------|
| 5 | SHEET | SHEET NAME:<br><br>DETAILS | PROJECT INFO<br><br>HAROLD SMITH AND SON<br>1505 CHARTER OAK AVENUE<br>SAINT HELENA, CA 94574<br>APN: 009-280-040 | REV # | DESCRIPTION | DATE | PREPARED BY<br><br>JOE PRIDMORE<br>110 VIOLA WAY<br>ANGWEN, CA 94508<br>(707) 815-2457<br>JOEPRIDMORE@GMAIL.COM |                 | JP DESIGNS |
|   |       |                            |                                                                                                                   |       |             |      | PROJECT # 00008                                                                                                 | DATE 08/29/2016 |            |







Google Maps



old Reclaimer location



new location

Page 1 of 1

Google Maps



Map data ©2016 Google 20 ft

Harold Smith & Son, Inc.

1505 Charter Oak Ave. St. Helena, CA

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PLANNING DEPARTMENT

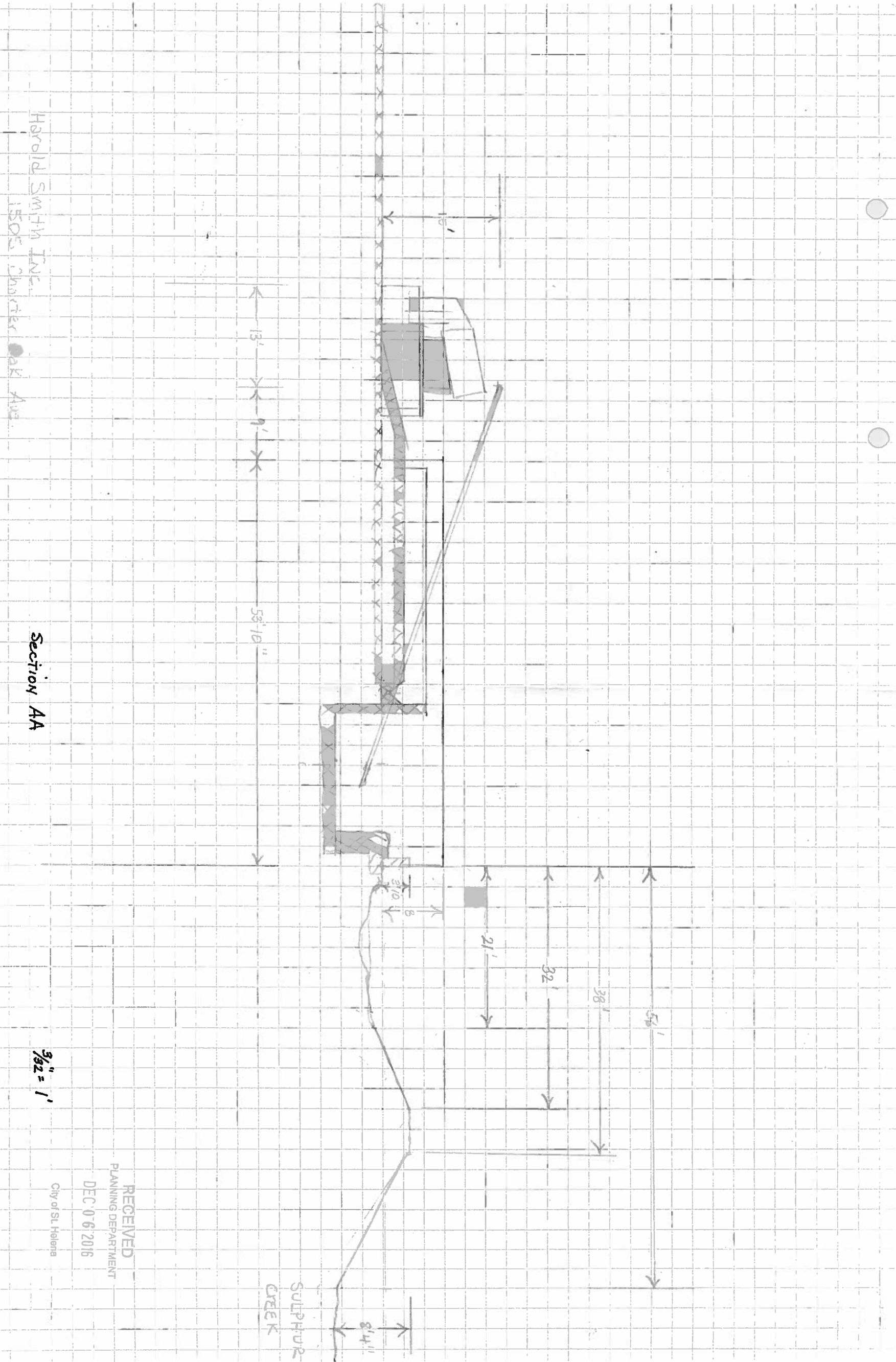
DEC 06 2016

City of St. Helena

8/23/2016

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HAROLD SMITH INC.

1505 Charter Oak Ave.

Section AA

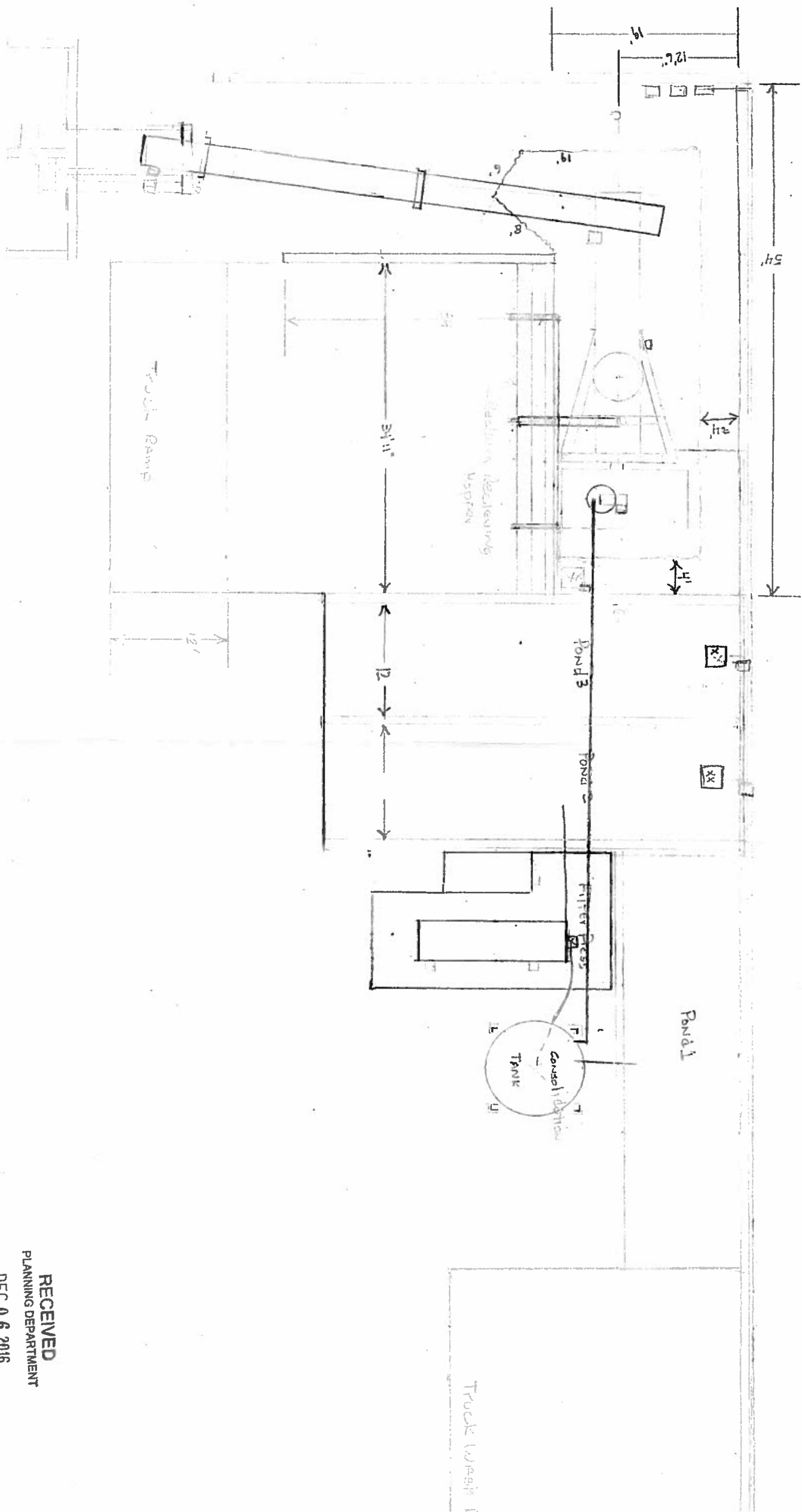
3/32" = 1'

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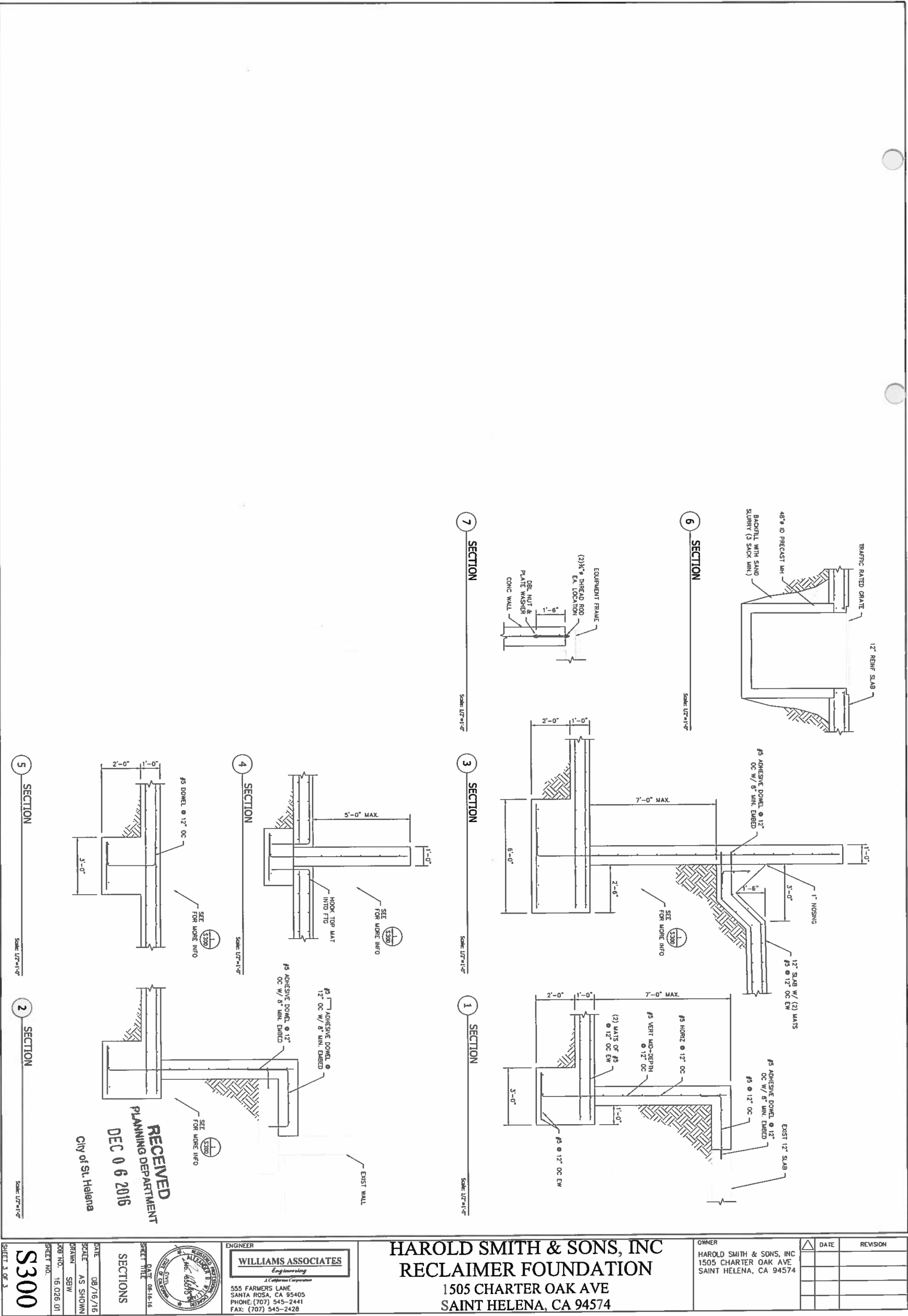
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City of St. Helena

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DEC 06 2016  
City of St. Helena



**CITY OF ST. HELENA  
PLANNING DEPARTMENT 1480 MAIN STREET- ST. HELENA, CA 94574  
PLANNING COMMISSION**

**MARCH 7, 2017**

**AGENDA SECTION:** Public Hearing

**FILE NUMBER:** PL17-005

**SUBJECT:** Request by Shannon Coombs for a use permit in order to establish a clothing and fashion accessories boutique in a new tenant space located in the Menegon Building at 1380 Main Street in the CB: Central Business district.

**PREPARED BY:** Aaron Hecock, Senior Planner

**REVIEWD BY:** Noah Housh, Planning Director

**APPLICATION FILED:** 01/18/17

**ACCEPTED ASCOMPLETE:** 01/27/17

**LOCATION OF PROPERTY:** 1380 Main Street, Suite #103

**APN:** 009-212-001

**GENERAL PLAN/ZONING:** Central Business/CB: Central Business

**APPLICANT:** Shannon Coombs

**PHONE:** (304) 276-4405

**PROJECT DESCRIPTION**

The applicant is seeking use permit approval in order to open a clothing and accessories boutique in Suite #103 of the Menegon Building at 1380 Main Street. The store would occupy one of three tenant spaces on the ground floor of the building and would be approximately 750-sf in size. According to the applicant, the store's focus will be on women's wear split between upscale yet affordable casual wear and semi-formal attire along with hostess gifts and fashion accessories. They would also like to offer a selection of men's wear and feature local designers from time to time. They plan for the store to be open 7 days/week and to have one full-time employee and one to three part-time employees.

**ANALYSIS**

**CEQA**

Staff finds that the project is exempt from the requirements of CEQA pursuant to Section 15301, Class 1, which exempts the operation, leasing, or minor alteration of existing facilities. The proposed project is not subject to any of the exceptions to the use of a categorical exemption as outlined in CEQA Section 15300.2. The project site is not located on or near an environmentally sensitive area, is not visible from a scenic

1380 Main Street #103  
Use Permit  
March7, 2017

highway, is not included on a hazardous waste site, and will not impact historic resources or otherwise generate or contribute to any potentially significant impacts.

### **GENERAL PLAN**

The subject property has a General Plan land use designation of Central Business (CB). This designation provides for retail, personal service uses, offices, restaurants, hotels/motels, service stations, public and quasi-public uses, and similar and compatible uses that serve local residents and the surrounding area. Emphasis is on pedestrian-oriented retail and service uses on the ground floor level, with office and residential uses on the upper levels. The intent is for the CB district to remain primarily local resident-serving in character. New uses which serve both local residents and tourists are allowed. General Plan policies applicable to the proposed project include:

- **2.6.35** Maintain the Central Business District as the City's social and cultural core and the primary center for retail business.
- **2.6.38** Encourage primarily local serving businesses in the CB and SC designated areas.
- **3.4.2** Support the development of a responsible visitor-serving component to the City's economy as a valuable source of jobs, tax revenues, and cultural amenities.

### **ZONING**

Consistent with the Central Business land use designation in the General Plan, the site exhibits a zoning designation of CB: Central Business. This designation provides for retail, personal service uses, offices, restaurants, hotels/motels and other similar and compatible uses. The intent is for the CB district to remain primarily locally serving in character. New uses which serve both local residents and tourists are allowed; however, uses which are primarily tourist-serving are not permitted. Local serving businesses are considered to be those that derive a significant portion of their revenue from St. Helena residents, and which provide services and products which satisfy local resident's day to day needs. It is presumed that the "local" customer base is defined by regular repeat customers from the community.

Pursuant to Municipal Code Section 17.48.030, clothing stores limited to the sale of new clothing and clothing accessories requires approval of a Use Permit in the Central Business district. Therefore, the applicant is required to obtain a Use Permit in order to allow for the establishment of a new clothing store in the proposed tenant space.

#### *Use Permit*

The purpose of a use permit is to allow the proper integration of essential or desirable uses which may be suitable only in certain locations or zoning districts in the City, or to ensure that such uses are designed or arranged on the site in a particular manner. In its review of applications for use permits, the Planning Commission shall evaluate each proposed use in order to consider its impact on the City. Pursuant to Municipal Code Section 17.168 050, no use permit shall be granted unless the following findings can be made:

1380 Main Street #103  
Use Permit  
March 7, 2017

1. That the proposed use would not generate odors, fumes, dust, light, glare, radiation or refuse that would be injurious to surrounding uses or to the community.
2. That the proposed use would not generate levels of noise that adversely affect the health, safety, or welfare of neighboring properties or uses.
3. That the proposed use would not generate traffic noise in excess of the "normally acceptable" range identified in the General Plan.
4. That the proposed use would not make excessive demands on the provision of public services including water supply, sewer capacity, energy supply, communication facilities, police protection, and fire protection.
5. That the proposed use would provide adequate ingress and egress to and from the proposed location.
6. That allowing the proposed use would not conflict with the City's goal of maintaining the economic viability of a local serving economy.
7. That the proposed use would be compatible with surrounding land uses and would not conflict with the purpose established for the district within which it would be located.
8. That the proposed use would not be in conflict with the City's General Plan.
9. That the proposed use would not be injurious to public health, safety, or welfare.
10. That granting the use permit would not set a precedent for the approval of similar uses whose incremental effect would be detrimental to the City or would be in conflict with the General Plan.
11. That, as demonstrated on a detailed plan submitted by the applicant, adequate off-street parking to accommodate the long term parking needs of employees and business owners and customers is available.
12. That the capacity of surrounding streets is adequate to serve the automobile and delivery truck traffic generated by the proposed use.

***Staff Response:** Staff finds that the project meets and/or complies with the required findings to approve a Use Permit as identified above. The findings included in the attached resolution identify this compliance.*

#### **PARKING**

As discussed, the applicant's tenant space is within the recently constructed Menegon Building at 1380 Main Street. This building was approved for retail uses on the ground floor and provides 11 on-site parking spaces. As the proposed retail store would be located within this approved retail area of the building, the project does not require additional off-street parking.

#### **SIGNAGE**

The applicant is not proposing any new or modified signage at this time.

1380 Main Street #103  
Use Permit  
March 7, 2017



**CORRESPONDENCE**

As of the completion of this report staff had received no correspondence related to this application.

**ISSUES**

Staff has not identified any issues that require additional discussion in relation to this application.

**STAFF RECOMMENDATION**

Staff recommends that the Planning Commission:

1. Determine that the project is exempt from the requirements of CEQA pursuant to Section 15301, Class 1, which exempts the operation, leasing, or minor alteration of existing facilities; and
2. Accept the required findings and approve a Use Permit for a new clothing store at 1380 Main Street Suite #103.

**ATTACHMENTS**

1. Resolution / Conditions of Approval
2. Applicant Statement
3. Floor Plan

**CITY OF ST. HELENA, STATE OF CALIFORNIA  
USE PERMIT NO.  
GRANTED TO 1380 MAIN STREET SUITE #103**

**PROPERTY OWNER:** Gary Menegon

**APN:** 009-212-001

**RECITALS**

1. The applicant requests a use permit in order to establish a clothing and fashion accessories boutique in a new tenant space located in the Menegon Building at 1380 Main Street in the CB: Central Business district.
2. The Planning Commission of the City of St. Helena, State of California, held a duly noticed public hearing on March 7, 2017.

**RESOLUTION**

The Planning Commission of the City of St. Helena, State of California, approved the Use Permit on the following basis:

- A. In making the findings in this Resolution, the Planning Commission relied upon and hereby incorporates by reference all of the documents referenced in this Resolution and the associated staff reports, City files for this matter, correspondence, presentations and other materials.
- B. The Planning Commission hereby finds that this project is exempt from the requirements of CEQA pursuant to Section 15301, Class 1, which exempts the operation, leasing, or minor alteration of existing facilities.
- C. In accordance with Municipal Code Section 17.168.050, the Planning Commission makes the following use permit findings to support the motion to approve the use permit:
  1. *That the proposed use would not generate odors, fumes, dust, light, glare, radiation or refuse that would be injurious to surrounding uses or to the community in that the use is retail in nature and would occur within an existing recently constructed building designed for retail uses.*
  2. *That the proposed use would not generate levels of noise that adversely affect the health, safety, or welfare of neighboring properties or uses in that the use is retail in nature and would occur within an existing recently constructed building designed for retail uses.*
  3. *That the proposed use would not generate traffic noise in excess of the "normally acceptable" range identified in the General Plan as project generated traffic will not increase the level of traffic noise on Highway 29 (Main Street).*
  4. *That the proposed use would not make excessive demands on the provision of public services including water supply, sewer capacity, energy supply, communication facilities, police protection, and fire protection in that the use is retail in nature and will therefore not make excessive demands on these services.*
  5. *That the proposed use would provide adequate ingress and egress to and from the proposed location as ingress and egress would not change for the existing building.*

1380 Main Street #103  
Use Permit  
March 7, 2017

6. *That allowing the proposed use would not conflict with the City's goal of maintaining the economic viability of a local serving economy in that the proposed use will serve the local community.*
7. *That the proposed use would be compatible with surrounding land uses and would not conflict with the purpose established for the district within which it would be located as the proposed uses are consistent with the Central Business zoning district.*
8. *That the proposed use would not be in conflict with the City's General Plan in that it can be both local and tourist serving.*
9. *That the proposed use would not be injurious to public health, safety, or welfare in that it is retail in nature and within an existing building.*
10. *That granting the use permit would not set a precedent for the approval of similar uses whose incremental effect would be detrimental to the City or would be in conflict with the General Plan in that this use permit only applies to this property and to these specific uses.*
11. *That, as demonstrated on a detailed plan submitted by the applicant, adequate off-street parking to accommodate the long term parking needs of employees and business owners and customers is available in that the project's ability to meet required parking has been accounted for in approval of the new building and discussed in the staff report.*
12. *That the capacity of surrounding streets is adequate to serve the automobile and delivery truck traffic generated by the proposed use in that the proposed uses will occur in an existing building, will generate very little traffic and can adequately be served by existing streets.*

#### **Planning Department Conditions of Approval**

D. The Use Permit for the above described use is granted subject to compliance with the following conditions. The Use Permit shall be in conformance with all City ordinances, rules, regulations and policies in effect at the time of issuance of a building permit. The conditions noted below are particularly pertinent to this permit and shall not be construed to permit violation of other laws and policies not so listed.

1. The Use Permit shall be vested within one (1) year from the date of approval. The permit may be extended for up to two (2) one-year periods pursuant to the St. Helena Municipal Code, Section 17.08.130, Extension of Permits and Approvals. Any request for an extension must be justified in writing and received by the Planning Department at least thirty (30) days prior to expiration.
2. This permit is valid for this use only. New permits must be applied for upon any change in use. This permit will expire if the use is discontinued pursuant to then existing ordinances and regulations.
3. The permit shall not become effective until fourteen (14) calendar days after approval, providing that the action is not appealed to the City Council within that 14 day period.
4. All required fees, including planning fees, development fees, housing fees, building fees toilet retrofit fees, and St. Helena Unified School District fees shall be paid prior to issuance of building permit. Fees shall be those in effect at the time of the issuance of the building permit.
5. Compliance with all permit conditions shall occur in accordance with specific regulations but in all cases no later than prior to occupancy or initiation of use unless

1380 Main Street #103  
Use Permit  
March 7, 2017

another time is set by law or by this approval. Occupancy or final inspection of a project may be withheld if all conditions, including payment of fees for services rendered by the City, are not met.

6. In any action or proceeding to attack, challenge, invalidate, set aside, void or annul the City's approval of applicant's project, in whole or in part, applicant shall defend, at its own expense and without any cost to the City, and with counsel acceptable to the City, and shall fully and completely indemnify and hold the City, its agents, officers, and employees harmless from and against any and all claims, causes of action, damages, costs, attorney's fees and liability of any kind, so long as the City reasonably promptly notifies the applicant of any such claim, action, or proceedings and the City cooperates fully in the defense of the action or proceedings.
7. Provided they are in general compliance with the permit, minor modifications may be approved by the Planning Director.
8. This permit shall run with the land and shall be binding upon all parties having any right, title or interest in the real property or any part thereof, their heirs, successors and assigns, and shall inure to their benefit and benefit of the City of St. Helena.
9. The primary purpose of this review is for compliance with the General Plan and Zoning Ordinance. The owner/applicant is responsible for meeting with the Building Official/Fire Inspector to review compliance with Building and Fire Codes, including fire protection systems and the accessibility standards of Title 24.
10. Fire equipment shall be inspected annually by the Fire Department.
11. To reduce disturbance of residents in the project vicinity, construction activities which generate noise that can be heard at the property line of any parcel of real property within the City limits shall be limited to 8:00 a.m. to 5:00 p.m. Monday through Saturday. Delivery of materials/equipment and cleaning and servicing of machines/equipment shall be limited to 7:00 a.m. to 6:00 p.m. Exceptions to these time restrictions may be granted by the Public Works Director for one of the following reasons: (1) inclement weather affecting work, (2) emergency work, or (3) other work, if work and equipment will not create noise that may be unreasonably offensive to neighbors as to constitute a nuisance. The City Engineer must be notified and give approval in advance of such work. No construction activities shall occur on Sundays or federal or local holidays that generate noise that can be heard at the property line of any parcel of real property within the City limits.

#### **Public Works Department Conditions of Approval**

12. Approval of this project shall be subject to the requirements of, and all improvements shall be designed and constructed in accordance with, the most current version at the time of improvement plan submittal, Caltrans Standards and Specifications, the City of St. Helena Municipal Code, the St. Helena Water and Sewer Standards, the St. Helena Street, Storm Drain and Sidewalk Standards, and all current federal, state and county codes governing such improvements.
13. For any improvements outside the existing building envelope, a grading and drainage plan showing topographic data, all easements, infrastructure onsite and directly adjoining, and an erosion control plan shall be submitted for review and

approval by the City Engineer prior to the issuance of a building permit. If the project entails more than 50 cubic yards of soil disturbance, 10,000 square feet of disturbance area, a cut or fill of 3 feet or more, or alteration of any drainage pattern, a grading permit shall be required.

14. The applicant shall repair all public improvements that are damaged by the construction process in accordance with the City Water/Sewer/Street/Storm Drain/Sidewalk Standards prior to Certificate of Occupancy.
15. Existing streets being cut by new utility services will require edge grinding and an A.C. overlay per City standards, extent to be determined by the Public Works Department.
16. An encroachment permit shall be required for any work performed in the public right of way.

#### **Building Department Conditions of Approval**

17. The applicant will be required to comply with the codes adopted at the time the applicant applies for a building permit. At this time the City of St. Helena utilizes the 2013 Title 24 codes.
18. When submitting plans for a building permit, the plans shall include all documentation listed on the building permit application checklist.
19. The applicant shall provide a construction waste management plan with the building permit application.
20. The plans for construction shall include a checklist for compliance with the California Green Buildings Standards Code, mandatory measures. Provide a reference on the checklist indicating where the mandatory measures can be found on the plans.
21. When submitting plans, the title page shall include all information referenced on the building permit application checklist Title Page requirements.
22. Building Permit application materials and plans shall include any documentation pertaining to special loads applicable to the design and the specified section of the code that addresses the condition; special inspections for any systems or components requiring special inspection; requirements for seismic resistance; and a complete list of deferred submittals at time of application. Any deferral of the required submittal items shall have prior approval of the Building Official however deferral of fire sprinkler design is not allowed.

**I HEREBY CERTIFY** that the foregoing Use Permit was duly and regularly approved by the Planning Commission of the City of St. Helena at a regular meeting of said Planning Commission held on March 7, 2017 by the following roll call vote:

**AYES:**

**NOES:**

**ABSENT:**

**ABSTAIN:**

APPROVED:

ATTEST:

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Grace Kistner  
Chair, Planning Commission

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Noah Housh  
Planning Director





Dolly Donati LLC, DBA Material Movement is submitting a Use Permit request to apply for the opportunity to open a clothing and accessories boutique on Main Street, St. Helena, CA.

The focus will be on women's wear split between upscale yet affordable casual wear and semi-formal attire for functions such as wine dinners, cocktail parties, weddings, etc. along with gift items such as hostess gifts and accessories to compliment wardrobe. We will be targeting a trendier market than what is currently found in the local boutiques in St. Helena and compliment them as a local business owner attracting both local and tourism business. We will be concentrating on the twenty-two to sixty-year old demographic. A selection of men's wear is also something we would like to offer as well as to feature some local designers from time to time.

The boutique will be open Monday through Saturday 10-5:30/6 and Sundays 11-4. The amount of Employees will be one full-time and 1-3 part-time depending on the season.

There will not be any major interior modifications other than finishing the interior walls which are already studded out. The ceiling needs finished and interior painted.

With a current successful boutique history of 12 years, we look forward to becoming a part of the St. Helena business community and finding continued success in the retail industry.

Best,  
Shannon Coombs  
Chris Donati

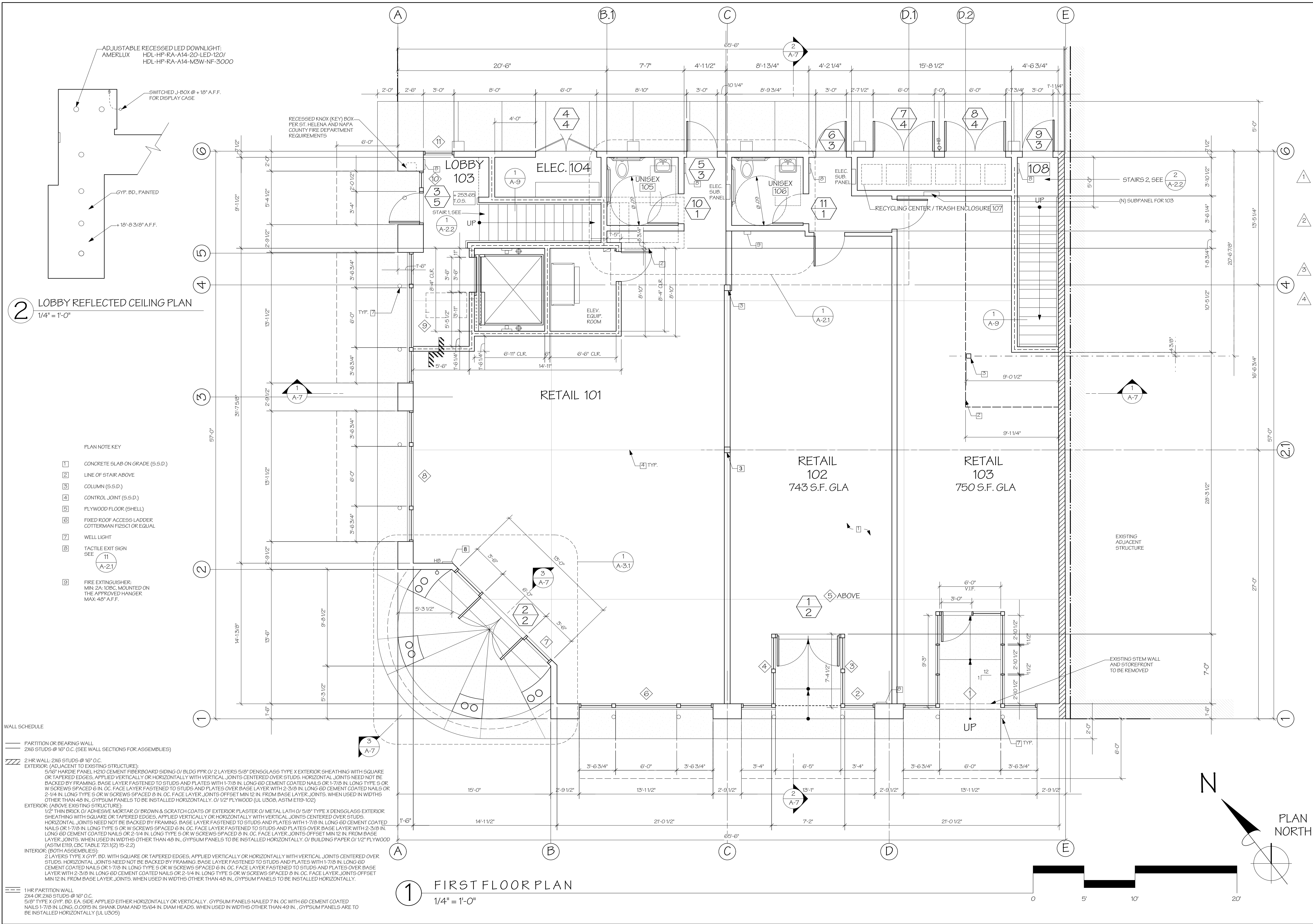
 1/11/17  
Chris Donati 1-11-17

RECEIVED  
PLANNING DEPARTMENT

JAN 18 2017

City of St. Helena





| REVISIONS                                      | BY  |
|------------------------------------------------|-----|
| SUBMITTED FOR DESIGN REVIEW 5/23/13            | EFH |
| 07.14.14                                       | EFH |
| 07.31.14                                       | EFH |
| 09.24.14                                       | EFH |
| 10.07.14                                       | EFH |
| SUBMITTED FOR BLDG. PERMIT 10/24/14            | EFH |
| 11.05.14                                       | EFH |
| 11.14.14                                       | EFH |
| REVISED PER PLAN CHECK COMMENT LETTER 11/13/14 | EFH |
| 03.31.15                                       | EFH |
| V.E. REVISION 4/2/15                           | EFH |
| ISSUED FOR CONSTRUCTION 4/10/15                | EFH |
| EAST STAIR COLUMN ADJUSTMENT 5/8/15            | EFH |
| ELEVATOR SHAFT ADJUSTMENT 5/8/15               | EFH |
| ELEVATOR SHAFT ADJUSTMENT 6/26/15              | EFH |



M.C.D.  
MIDGILLIO  
ARCHITECTURE  
+ DESIGN

381 ORANGE STREET  
OAKLAND  
CALIFORNIA  
94612 U.S.A.  
TEL: 510.891.9145  
FAX: 510.891.9107

**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

**1380 MAIN STREET**  
ST. HELENA, CALIFORNIA

**■ FIRST FLOOR PLAN**

**PROPOSED  
REVISED RETAIL  
SPACES  
102 & 103  
10/19/16**

|       |              |
|-------|--------------|
| Date  | 07/26/12     |
| Scale | 1/4" = 1'-0" |
| Drawn | NBJ          |
| Job   | ---          |
| Sheet | A-2          |
| Of    | Sheets       |





**CITY OF ST. HELENA  
PLANNING DEPARTMENT 1480 MAIN STREET- ST. HELENA, CA 94574  
PLANNING COMMISSION**

**March 7, 2017**

**AGENDA SECTION:** Public Hearing

**AGENDA ITEM:** #

**FILE NUMBER:** PL16-042; PL16-043

**SUBJECT:** *Culinary Institute of America (CIA) Campus Master Plan*  
1. Greystone Campus Design Review and Use Permit  
2. Vineyard Lodge Demolition Permit, Design Review, Use Permit, and Variance

**PREPARED BY:** Lilly Bianco, Contract Planner

**REVIEWED BY:** Noah Housh, Planning Director

**LOCATION OF PROPERTY:** 830 Pratt Avenue; 2555 Main

**APPLICANT:** Thomas Bensel, Managing Director of the Culinary Institute of America (CIA)

**PHONE:** 1(707) 967-2310

**APN:** APN.009-131-003 and 009-010-024

**GENERAL PLAN:** 2555 Main: Public; Quasi-Public  
830 Pratt: Agriculture

**ZONING:** 2555 Main: W/ PD Overlay /HP Overlay  
830 Pratt: PQP

**BACKGROUND**

On February 21, 2017 the Planning Commission heard the Culinary Institute of America's (CIA) request for design review and use permit approval for 2555 Main Street (Greystone Campus) and design review, use permit, demolition permit, and variances for 830 Pratt Avenue (Vineyard Lodge Housing site) which together, comprise the CIA Campus Master Plan project. In order to fully consider the lengthy application materials and public comments received, the Planning Commission closed the public hearing and continued it to a date certain (March 7, 2017).

At the Public Hearing, 24 public comments were heard both in support of the project and in opposition of the project. Those in support of the project cited the CIA's valuable role in St.Helena as an integral component of the community and feeling that the City

*CIA Campus Master Plan  
2555 Main Street and 830 Pratt Avenue  
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should promote the continuity of that. Those in opposition of the project voiced concern related to the project's use of public utilities and resources and the scale and massing of the proposed dormitory housing, as well as the extent to which the proposed housing complies with the established character of the vicinity.

To encourage a thoughtful and well-informed deliberation and to provide the Planning Commission the chance to more fully reconcile public comments with the project proposal, staff has provided an expanded discussion of key areas of concern. Specific topics addressed include: General Plan consistency, design merits, and wastewater capacity.

#### 1. General Plan Consistency

At the February 21<sup>st</sup> Public Hearing the project's consistency with applicable General Plan policies was questioned. Namely, the project's consistency with the following:

- 4.3.1 Preserve the Rural small town quality of St.Helena which includes the compact commercial core of one and two story buildings, and
- 4.3.5 Require future residential development to conform to the pattern and density of older, neighboring areas of town in order to complement existing town character and ensure that densities are high enough to protect against unnecessary incursion into vineyard agricultural areas.

First, staff would like to clarify that the consistency analysis provided in the February 21<sup>st</sup> Staff Report did not constitute an exhaustive list of every possible policy that may apply, but rather considered a representative list of policies most pertinent to the project at hand.

The St.Helena General Plan contains many different, sometimes competing provisions and policies that the City's decision-makers are to consider, weigh and harmonize. As detailed herein, the 1993 General Plan includes policies to preserve the rural small town quality and continue development patterns and character of historic neighborhoods. At the same time, the 2015-2023 Housing Element encourages the City to promote in-fill, innovative design, and higher density development to minimize sprawl and postpone the need to expand the Urban Service Area. Housing Element goal HE 2.F specifically calls for the City to, "Update the General Plan Land Use Element in consideration of the established Housing Element land use goals and policies. Amend General Plan Elements concurrent with adoption of the General Plan Update as needed to ensure internal consistency." The inclusion of HE 2.F highlights the fact that there is some level of conflict between the various policies and reinforces the importance of balancing what may be viewed as competing needs.

Ultimately, it is at the Lead Agencies discretion to determine how to interpret and balance the various goals and objectives of the General Plan and Housing

Element. It is widely acknowledged that a given project need not be in *perfect* conformity with each and every policy of the General Plan if those policies leave the city room for interpretation. The vast majority of policies applicable to the subject project are relatively nuanced and not worded such that they constitute specific, fundamental, or mandatory standards or actions. For those reasons, Staff maintains that the project can be found to exhibit overall consistency with applicable, and what are sometimes competing, policies of the 1993 General Plan and 2015-2023 Housing Element.

## 2. Design Merit

At the February 21<sup>st</sup> hearing much of the comment centered on the massing and scale of the proposed Vineyard Lodge Housing Buildings and a sense that it was not appropriate for the site at 830 Pratt Avenue. It was contended that the proposed buildings are not compatible with the character of the vicinity and are too massive.

As detailed in the February 21<sup>st</sup> Staff Report, to approve design review, the Commission must find that the project is consistent with the design criteria prescribed by Section 17.164.030 and exhibits a quality of design that is compatible with adjacent development, features a siting, scale, massing and architectural style that is generally consistent with the predominant development patterns and that does not otherwise detract or negatively affect the established character of the site or surrounding neighborhood.

To objectively illustrate the project's consistency with the Design Review Criteria the applicants prepared a Visual Impact Assessment based on the Bureau of Land Management's methodology. In short, projects that create a high level of contrast to the existing visual character of a project setting are more likely to generate adverse visual impacts due to the inherent visual compatibility. Conversely, projects that create a low level of contrast to the existing visual character are less likely to generate adverse visual impacts due to inherent visual compatibility. As detailed in the Staff Report, when considered relative to existing site conditions, the level of contrast was perceived to be limited to an extent that it would not significantly alter the existing character of the site or its relationship to surrounding properties.

What appears to be overlooked is the fact that the subject site is *already* developed with urban uses and features dormitory buildings. The established character of the site and its visual relationship to surrounding properties would clearly evolve under the proposed project, but it would not so substantially alter the *existing character* of the site or visual relationship to the extent that it would negatively impact the visual environment. Ultimately, staff concurs with the findings of the Visual Impact Assessment that the design elements (stepped design, neutral hues, landscaping to soften the buildings) endeavor to balance the aesthetic needs with functional needs of the project and therefore staff finds that the project exhibits overall consistency with required Design Review Criteria.

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3. Wastewater Capacity.

Another topic of concern includes wastewater capacity, and, more specifically, the ability of the Crinella Pump Station to accommodate flows from the Vineyard Lodge Housing Site.

As detailed in the IS/MND and Response to Comments, The Culinary Institute expansion will not increase the frequency of sewer overflows and further, conveyance of all flows will be limited to off-peak times. Condition of Approval number 45 imposed on the Vineyard Lodge Housing component, requires the applicant to perform 7-day flow monitoring at the downstream sanitary sewer manholes (No. 6-5 and No. 6-18) to confirm the theoretical assumptions in the provided wastewater capacity study; peak sewer flows will not be allowed to exceed 2/3 full pipe. If insufficient capacity is available at the site and with the current infrastructure, a new sanitary sewer must be constructed with adequate capacity by the owner as a condition of the site development.

Last, the City's newly adopted rate study includes \$500,000 in upgrades to the Crinella Pump Station to be constructed in 2019/2020. This Project is envisioned to upgrade the pump station to new engineering designs, and to address any capacity and odor issues.

Given the above, Staff maintains the determination that the project would not negatively impact the Crinella Pump Station and in the event that the flows are found to exceed theoretical assumptions, this would be resolved by compliance with condition of approval imposed on the project.

### **STAFF RECOMMENDATION**

The Planning and Community Improvement Department recommends that the Planning Commission:

1. Adopt the Mitigated Negative Declaration and Mitigation and Monitoring Program for the project; and
2. Approve the requested Use permit and Design Review for 2555 Main Street and approve the Demolition Permit, Design Review, Use Permit, and Variances for 830 Pratt Avenue.

### **ATTACHMENTS**

1. Resolution
2. Public comments received after Feb 21, 2017 at 5pm
3. Supplemental information from Applicant, March 1, 2017
4. February 21, 2017 Planning Commission Packet Items



**CITY OF ST. HELENA PLANNING COMMISSION**

**RESOLUTION PC20xx-xx**

**RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF ST. HELENA  
ADOPTING A MITIGATED NEGATIVE DECLARATION AND MITIGATION  
MONITORING AND REPORTING PROGRAM FOR THE CULINARY INSITUTE OF  
AMERICA CAMPUS MASTER PLAN AND GRANTING APPROVAL OF DESIGN  
REVIEW AND A USE PERMIT FOR 2555 MAIN STREET AND GRANTING APPROVAL  
OF A DEMOLITION PERMIT, DESIGN REVIEW, USE PERMIT, AND VARIANCES FOR  
830 PRATT AVENUE IN THE CITY OF ST.HELENA, CALIFORNIA**

**PROPERTY OWNER:** CULINARY INSTITUTE OF AMERICA

**APN:** 009-010-024  
and 009-131-003

**Recitals**

1. **Whereas**, The Culinary Institute of America submitted an application for Design Review and Use Permit approval to expand student enrollment to 300 students, introduce storage cave, and three modular storage units at the Greystone Campus at 2555 Main Street (APN.009-131-003); and
2. **Whereas**, The Culinary Institute of America also submitted an application for a Demolition Permit, Design Review, Use Permit, and Variances to expand the student housing at the Vineyard Lodge Housing Site at 830 Pratt Avenue (APN. 009-010-024); and
3. **Whereas**, Pursuant to CEQA Guidelines Sections 15072 and 15073, a Draft Mitigated Negative Declaration and included Initial Study was circulated for public review and comment from December 9, 2016 until January 23, 2017; and
4. **Whereas**, the Initial Study/Mitigated Negative Declaration concluded that implementation of the Project could result in a number of potentially significant effects on the environment and identified mitigation measures that would reduce the significant effects to a less-than-significant level; and
5. **Whereas**, in connection with the approval of a project involving the preparation of an initial study/mitigated negative declaration that identifies one or more significant environmental effects, CEQA requires the decision-making body of the lead agency to incorporate feasible mitigation measures that would reduce those significant environmental effects to a less-than-significant level; and.
6. **Whereas**, whenever a lead agency approves a project requiring the implementation of measures to mitigate or avoid significant effects on the environment, CEQA also

*2555 Main Street/ 830 Pratt Avenue  
Demolition Permit, Variance, Design Review and Use Permit  
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requires a lead agency to adopt a Mitigation Monitoring and Reporting Program to ensure compliance with the mitigation measures during project implementation; and

7. **Whereas**, The Planning Commission of the City of St. Helena, State of California, considered the project, staff report, and all testimony, written and spoken, at a duly noticed public hearing on February 21, 2017 which was continued to a date certain, March 7, 2017.
8. **Whereas**, A public notice was published in the St. Helena Star and mailed to residents and occupants within 500 feet of the project site and in compliance with state and local law; and
9. **Now, therefore** let it be found that, the Planning Commission adopts the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program, and approves the requested Use permit and Design Review for 2555 Main Street and approves the Demolition Permit, Design Review, Use Permit, and Variances for 830 Pratt Avenue on the following basis:

#### **Resolution**

1. In making the findings in this Resolution, the Planning Commission relied upon and hereby incorporates by reference all of the documents referenced in this Resolution and the associated staff report, City files for this matter, correspondence, presentations and other materials.
2. CEQA Findings
  1. The Planning Commission has independently reviewed and analyzed the Initial Study/Mitigated Negative Declaration and other information in the record and has considered the information contained therein, prior to acting upon or approving the Project,
  2. The Initial Study/Mitigated Negative Declaration prepared for the Project has been completed in compliance with CEQA and consistent with state and local guidelines implementing CEQA,
  3. On the basis of the whole record, there is no substantial evidence that the Project as designed, conditioned, and mitigated, will have a significant effect on the environment.
  4. The Initial Study/Mitigated Negative Declaration represents the independent judgment and analysis of the City as lead agency for the Project.
3. 2555 Main Street Findings and Conditions of Approval
  - A. **DESIGN REVIEW.** The Planning Commission finds that The Greystone Campus is historically significant as a good example of the late nineteenth century Richardsonian Romanesque architecture in California and provides a tangible link to the Napa Valley's historical viticultural operations of the last century. All project activities are either confined to the interior of buildings or less visible areas of the property such that any changes are not readily visible from main viewing areas. The exterior modifications proposed for the subject include the introduction of three new modular storage units at the rear of the property. The introduction of the proposed

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modular units would be reversible and their removal in the future would not affect the historic integrity of the building. Given the very limited design changes and for the reasons described below, the project is found to be generally consistent with the design review requirements. As such, the Planning Commission determines the project is in compliance with the following Design Review criteria of Municipal Code Section 17.164.030:

1. Consistency and compatibility with applicable elements of the general plan;  
*As proposed the project will facilitate the continued use of the historic Greystone building and in doing so would preserve the historic resource as a valuable piece of St. Helena's heritage. As such, the project would be consistent with GP Policies, 2.6.30, 4.8.1, 4.8.2. Further, the Culinary Institutes' emphasis on food and wine education promotes the Valley's reputation of a world class destination for wine and the culinary arts. As such, the proposed project exhibits overall consistency with all applicable General Plan goals, policies, and objectives.*
2. Compatibility of design with the immediate environment of the site;  
*No exterior changes are proposed that would alter the design of the building or site.*
3. Relationship of the design to the site;  
*The design will greatly limit changes visible on the building exterior; for example, the proposed modular units will be located at the building's rear and not readily visible from public viewing areas. As such, the relationship of the design to the site is appropriate.*
4. Determination that the design is compatible in areas considered by the board as having a unified design or historical character;  
*All work will be performed in accordance with the Secretary of the Interior's Standards and will be consistent with the historic character of the subject site.*
5. Whether the design promotes harmonious transition in scale and character in areas between different designated land uses;  
*No substantial changes are proposed that would alter the existing scale or character.*
6. Compatibility with future construction both on and off the site;  
*No exterior changes are proposed that would alter compatibility with future construction on or off site.*
7. Whether the architectural design of structures and their materials and colors are appropriate to the function of the project;  
*The proposed modular units will be of simple design and materials which will ensure their functionality while also limiting changes to the visual environment.*
8. Whether the planning and siting of the various functions and buildings on the site create an internal sense of order and provide a desirable environment for occupants, visitors and the general community;

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*The majority of changes are confined to the interior of the existing Greystone building and therefore would not alter the existing site configuration or overall functionality of the site. The proposed modular units and storage cave would be located conveniently with connectivity to the internal uses they serve. As such, proposed changes would be functional and would limit changes to the visual environment of the site.*

9. Whether the amount and arrangement of open space and landscaping are appropriate to the design and the function of the structures;

*No open space or landscaping is proposed as part of this project.*

10. Whether sufficient ancillary functions are provided to support the main functions of the project and whether they are compatible with the project's design concept;

*The project includes modular storage units and storage cave that will support the Culinary school use of the site. The ancillary components are either shielded from view, in the case of the modular units, or underground and not visible, in the case of the storage cave. Given the limited visibility of both components, they are expected to be compatible with the overall design of the Greystone property.*

11. Whether access to the property and circulation systems are safe and convenient for pedestrians, cyclists and vehicles;

*No changes to the circulation system are proposed.*

12. Whether natural features are appropriately preserved and integrated with the project;

*No changes to natural features are proposed.*

13. Whether the materials, textures, colors and details of construction are an appropriate expression of its design concept and function and whether they are compatible with the adjacent and neighboring structure and functions;

*Three modular units ranging in size from 633 sf to 1,337 sf are proposed on the west elevation (rear) of the building. The units will be accessed from an existing roadway, supported on new horizontal steel structure that spans the area and similar to existing modern mechanical equipment supports. Utilitarian in nature, the units are constructed of painted metal siding, doors, and flat roofs behind shallow parapets. The proposed modular units are located away from principal elevations, have been designed to fit below the historic eave of the building, and are minimal in size compared to the original structure. Proposed work will use materials to differentiate the additions from the historic exterior masonry. These characteristics reflect the project's compliance with the Secretary of the Interior Standards for Rehabilitation (SOISR). Given the above, the proposed new modular units are expected to be compatible with adjacent structures and functions.*

15. Whether the landscape design concept for the site, as shown by the relationship of plant masses, open space, scale, plant forms and foliage textures and colors create a desirable and functional environment and whether the landscape concept depicts an appropriate unity with the various buildings on the site;

*There is no new landscaping proposed.*

16. Whether plant material is suitable and adaptable to the site, capable of being properly maintained on the site, and is of a variety which is suitable to the climate of St. Helena;

*No landscaping is proposed.*

17. Whether sustainability and climate protection are promoted through the use of green building practices such as appropriate site/architectural design, use of green building materials, energy efficient systems and water efficient landscape materials.

*All outdated/inefficient fixtures and systems will be replaced with more efficient and environmentally friendly fixtures and as such, the project will further sustainability goals.*

- B. USE PERMIT. Pursuant to Municipal Code Section 17.168.050, the Planning Commission acknowledges that the Culinary Institute of America at Greystone endeavors to place a greater focus on occupational education. To achieve this, the applicant requests that the use permit authorize a total enrollment of 300 students, allow more flexibility in the operation of the retail store, and allow for a 58 seat student-run restaurant to replace the now closed, 190-seat Wine Spectator at Greystone Restaurant. It is determined that proposed changes do not substantially increase the intensity of the site or otherwise create an impact that would conflict with any of the requisite findings needed to approve a use permit. Accordingly, the Planning Commission makes the following Use Permit findings to support the motion to approve the use permit:

1. That the proposed use would not generate odors, fumes, dust, light, glare, radiation or refuse that would be injurious to surrounding uses or to the community.

*No significant changes in the operation of the facility will change and there is no expectation that the proposed project would generate odors, fumes, dust, light, glare, radiation or refuse beyond what is currently typical of the culinary school use. As such, operation of the Greystone Campus consistent with the proposed project would not be injurious to surrounding uses or the community.*

2. That the proposed use would not generate levels of noise that adversely affect the health, safety, or welfare of neighboring properties or uses.

*Levels of noise would be consistent with or less than existing noise levels given the reduction in events and size of the on-site restaurant.*

3. That the proposed use would not generate traffic noise in excess of the "normally acceptable" range identified in the General Plan.

*As detailed in the Traffic Impact Report, the proposed project will not cause a substantial increase in traffic trips that would cause the ambient noise level to*

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*exceed the normally acceptable range. Given the limited traffic trips associated with the proposed project, the project would not cause traffic noise to noticeably increase beyond existing level or otherwise exceed normally acceptable ranges.*

4. That the proposed use would not make excessive demands on the provision of public services including water supply, sewer capacity, energy supply, communication facilities, police protection, and fire protection.

*The level of demand placed on public services will remain consistent with that which currently exists due to the introduction of more efficient fixtures and systems, adherence to the water neutrality policy, and the fact that the proposed use will continue to operate in a manner consistent with what currently exists, as a culinary school with an ancillary retail and restaurant component.*

5. That the proposed use would provide adequate ingress and egress to and from the proposed location.

*No changes to ingress/ egress are proposed.*

6. That allowing the proposed use would not conflict with the City's goal of maintaining the economic viability of a local serving economy.

*The proposed use is consistent with that which currently exists at the site and no changes are expected that would otherwise conflict with the City's goal of maintaining the economic viability of a local serving economy.*

7. That the proposed use would be compatible with surrounding land uses and would not conflict with the purpose established for the district within which it would be located.

*No significant change in use or operation is proposed and as such, the proposed use would continue to be compatible with surrounding land uses.*

8. That the proposed use would not be in conflict with the City's General Plan.

*As detailed above, the use would be consistent with all applicable General Plan policies.*

9. That the proposed use would not be injurious to public health, safety, or welfare.

*The proposed use is largely consistent with that which currently exists at the subject site and is not expected to be injurious to public health, safety, or welfare.*

10. That granting the use permit would not set a precedent for the approval of similar uses whose incremental effect would be detrimental to the City or would be in conflict with the General Plan.

*The findings related to this particular project are unique and applicable only to the CIA Campus Master Plan. There is no reason to expect that approval of this use permit would set a precedent for the approval of similar uses whose incremental effect would be detrimental to the City or would be in conflict with the General Plan.*

11. That, as demonstrated on a detailed plan submitted by the applicant, adequate off-street parking to accommodate the long term parking needs of employees and business owners and customers is available.

*No changes to parking are proposed. Students living off-site would continue to be required to utilize the shuttle for transportation between student housing and the Greystone Campus. As such, no demand that couldn't be accommodated by the existing level of parking is expected.*

12. That the capacity of surrounding streets is adequate to serve the automobile and delivery truck traffic generated by the proposed use.

*The surrounding roadways will continue to be able to accommodate automobile and truck traffic generated by the proposed project and is not expected to increase substantially beyond that which currently exists.*

- C. The Planning Commission approves the design review and use permit for the above-described project with the following conditions of approval. The project shall be in conformance with all city ordinances, rules, regulations and policies in effect at the time of issuance of a building permit. The conditions noted below are particularly pertinent to this permit and shall not be construed to permit violation of other laws and policies not so listed.

#### **Conditions of Approval**

1. Project approvals shall be vested within one (1) year from the date of final action. A building permit for the use allowed under this approval shall have been obtained within one (1) year from the effective date of this action or the approval shall expire, provided however that the approval may be extended for up to two (2) one-year periods pursuant to the St. Helena Municipal Code, Section 17.08.130, Extension of Permits and Approvals. Any request for an extension of this approval shall be justified in writing and received by the Planning Department at least thirty (30) days prior to expiration.
2. The approvals shall not become effective until fourteen (14) calendar days after approval, providing that the action is not appealed by the City Council or any other interested party within that 14-day period.

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3. All required fees, including planning fees, development impact fees, residential in-lieu housing fees, building fees, toilet retrofit fees, and St. Helena Unified School District fees shall be paid prior to issuance of a building permit. Fees shall be those in effect at the time of the issuance of the building permit.
4. Upon approval of Resolution XX-XX, the Applicant shall provide the Planning Department with the Notice of Determination Fee required by Fish and Wildlife Code Section 711.4(d). The fee payment shall be made by check payable to the Napa County Clerk and in the amount required and published by the Napa County Clerk for such fee.
5. All Mitigation Measures enumerated in the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program are incorporated by reference and made conditions of approval.
6. Prior to issuance of any construction permits, these conditions of approval *and* the Mitigation and Monitoring and Reporting Program shall be included with the plan set. A copy of the approved plans shall be maintained on site when construction activities are underway.
7. Pursuant to St. Helena Municipal Code Section 17.08.110, this permit shall run with the land and shall be binding upon all parties having any right, title or interest in the real property or any part thereof, their heirs, successors and assigns, and shall inure to their benefit and benefit of the City of St. Helena.
8. The primary purpose of this review is for compliance with the General Plan and Zoning Ordinance. The property owners or their designee shall be responsible for meeting with the Building Official, Fire Inspector and or Public Works Department to review compliance with Building Codes, Fire Codes and specific Public Works Standards including fire protection systems and any applicable accessibility standards of Title 24.
9. Construction shall be in compliance with plans submitted and reviewed by the Planning Commission on March 7, 2017, except as modified herein.
10. Minor modifications to approved plans may be approved by the Planning Director insofar as they are in substantial conformance with this approval.
11. The site shall be kept clear at all times of garbage and debris. No outdoor storage is permitted.
12. A final lighting plan delineating building mounted lights shall be reviewed and approved by the Planning and Community Improvement Director prior to building permit issuance.
13. Trash bins shall not be visible from public right-of-way.
14. All plantings shall be maintained in good growing condition. Such maintenance shall include, where appropriate, pruning, mowing, weeding, and cleaning of debris and trash, fertilizing and regular watering. Where necessary, plantings shall be replaced with other plant materials to insure continued compliance with applicable landscaping requirements, Irrigation systems shall be maintained in sound operating condition with heads periodically cleaned and replaced when missing to ensure efficient watering and to maintain good health and vitality of landscape materials.



15. No signage is approved by this permit. A separate sign permit in compliance with the Municipal Code shall be obtained prior to installation of signage.
16. Property owners shall recognize that there exists a right to farm properties within the district and in the vicinity of the district. There is a good faith expectation that no complaints will occur regarding legal, normal agricultural activities on properties in the district or in the vicinity of the district. Such activities may include day or night disbursement of chemicals, and creation of dust, noise, or fumes.
17. In any action or proceeding to attack, challenge, invalidate, set aside, void or annul the City's approval of applicant's Project, in whole or in part, applicant shall defend, at its own expense and without any cost to the City, and with counsel acceptable to the City, and shall fully and completely indemnify and hold the City, its agents, officers, and employees harmless from and against any and all claims, causes of action, damages, costs, attorney's fees and liability of any kind, so long as the City reasonably promptly notifies the applicant of any such claim, action, or proceedings and the City cooperates fully in the defense of the action or proceedings.

#### **Planning Department Conditions**

18. As applicable, the permittee shall comply with any and all previous conditions of approval for the CIA Greystone Campus except as they may be explicitly modified by this action. To the extent there is a conflict between previous conditions of approval enumerated in any previous resolutions relating to the subject site including, but not necessarily limited to: Resolution Nos. 93-105; 96-95; 97-162; 2001-60; 2003-42; 2004-112; 2006-07; 2006-130; or 2008-76 and these conditions of approval, these conditions shall control, superseding the prior approvals with respect to any such conflict.
19. The primary use shall be that of an advanced cooking school with ancillary uses limited to (1) 58 seat student run restaurant, (1) 35 seat bakery/café and, (1) 3,100 square foot retail store subject to the conditions herein.
20. The student population shall not exceed 300 students. Students shall be limited to those enrolled an Associate, Bachelor's, Master's and/or other Certificate Degree Program.
21. Only students actively enrolled at the CIA at Greystone campus shall be allowed to use school lodging accommodations. The student's length of stay shall be commensurate with the respective degree program.
22. As an ancillary component to the bakery and pastry education program and to help students satisfy educational requirements, a Bakery/Café with no more than 35 seats may be operated within the Greystone Cellars building.
23. A restaurant may be operated within the Flavor Discovery Center (FDC) as an accessory use to the school with seating limited to a total of 58 seats, including both

indoor and outdoor dining. Any outdoor dining shall be consistent with the Zoning Regulations in effect at the time of operation.

24. A 3,100 sf campus store may be operated as an accessory use to the school within the main winery building. The store shall be limited to the hours of operation of 10:00 a.m. – 7:00 p.m. Items sold at the retail store shall be directly related to the food and beverage industry or to the incidental needs of the student residents, such as toiletries and stationery. Bottled wine sales may be permitted. The store may be advertised in educational, food service, trade and Napa county newspapers of record. Site signage shall comply with the St. Helena sign ordinance. Wine tasting may occur within the store as an accessory and subordinate activity relating to the sale of wine but shall occur only during the hours the retail store is open."
25. Valet parking shall be provided for all special and community events if they are held during hours that the restaurant is open and/or when designated on-site parking is not adequate. No parking shall be permitted along Highway 29/Main Street or Deer Park Road.
26. The CIA may offer tours and limited educational experiences to the General Public so long as such activities are incidental and secondary to the primary degree and/or Certificate educational programs offered at Greystone.
27. The Applicant shall provide a Transportation Plan that describes the operation of (1) the shuttle service (2) the rental car service (3) parking permits for individual vehicles and (4) the specifics of the on-demand bike program as they relate to the Greystone Campus and Vineyard Lodge Housing Site. The Plan shall be subject to review and approval by the Planning and Community Improvement Director. A copy of the approved Transportation Plan shall be provided and kept in the hard copy and digital project file.
28. Modular Units and the underground cave shall be used for storage of products and wares used for the purposes of culinary education.
29. Prior to issuance of building permit, the applicant shall execute a Joint Water Use Agreement with the Vineyard Lodge Housing Site. The Joint Agreement shall authorize a maximum water allocation of 23.1 acre feet/year to be utilized by the two sites. The Joint Agreement shall include enforcement provisions and penalties if the allowance is exceeded in a given year.
30. Any significant change(s) to the operation of the approved use, including a change in hours of operation, intensity, or type(s) of uses shall require amendment to this use permit.

### **Public Works Conditions**

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31. Approval of this project shall be subject to the requirements of, and all improvements shall be designed and constructed in accordance with, the most current version at the time of improvement plan submittal, Caltrans Standards and Specifications, the City of St. Helena Municipal Code, the St. Helena Water and Sewer Standards, the St. Helena Street, Storm Drain and Sidewalk Standards, and all current federal, state and county codes governing such improvements.
32. For any improvements outside the existing building envelope, a grading and drainage plan showing topographic data, all easements, infrastructure onsite and directly adjoining, and an erosion control plan shall be submitted for review and approval by the City Engineer prior to the issuance of a building permit. If the project entails more than 50 cubic yards of soil disturbance, 10,000 square feet of disturbance area, a cut or fill of 3 feet or more, or alteration of any drainage pattern, a grading permit shall be required.
33. A detailed Soils Investigation/Geotechnical Report shall be prepared and submitted for review. The report shall address, at a minimum, potential for liquefaction, R-values, expansive soils, seismic risk, cave wall and ceiling stability, etc. The improvement plans shall incorporate all design and construction criteria recommended in the Geotechnical Report.
34. Remodels or new construction which requires fire sprinklers shall install an appropriately-sized water service with appropriate backflow and meter devices prior to Certificate of Occupancy. Fire system calculations shall be submitted with the Grading and Drainage Plan to verify fire service lateral and meter sizing. Deferred submittals are not accepted.
35. The applicant shall be required to submit to the requirements for annual inspections of food/beverage service establishments and businesses that handle hazardous wastes for illicit stormwater discharges as required by the State National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges. The annual stormwater illicit discharge inspections are performed and invoiced by Napa County Department of Environmental Management.
36. Trash areas, dumpsters and recycling containers shall be enclosed and roofed per State and County standards to prevent water run-on to the trash area and water runoff from the area, to contain litter and trash so that it is not dispersed by the wind or run-off during waste removal. In the event that wine or food is disposed in these areas, they shall drain to the sanitary sewer system. An area drain connected to the sanitary sewer shall be installed in the enclosure area and a structural control such as an oil/water separator or sand filter shall be included. No other area shall drain into the trash enclosure. A sign shall be posted prohibiting the dumping of hazardous materials into the sanitary sewer.
37. The applicant shall incorporate water conservation practices into the proposed project per the Water Neutrality Calculations prepared by Summit Engineering, dated October 15, 2016. Any and all non-conforming appliances and plumbing

fixtures shall be removed from the premises. The water conservation requirements shall be replicated in full on the architectural plans.

38. Erosion and sediment control plans shall conform to the latest State and City codes at a minimum.
39. Grading plans shall identify off-haul routes and soil disposal sites, subject to review and approval by Public Works. All grading and spoils generated by construction of the project facilities, including cave spoils, shall be removed and/or permanently placed prior to final occupancy.
40. The Applicant shall keep adjoining public streets free and clean of project dirt, mud, materials, and debris during the construction period, as is found necessary by the City Engineer.
41. Any new and modified existing water laterals, meters and backflow prevention devices shall be required and constructed in accordance with the requirements of the City of St. Helena's Water Standards.
42. The applicant shall repair all public improvements that are damaged by the construction process in accordance with the City Water/Sewer/Street/Storm Drain/Sidewalk Standards prior to Certificate of Occupancy.
43. Existing streets being cut by new utility services will require edge grinding and an A.C. overlay per City standards, extent to be determined by the Public Works Department.
44. The applicant shall be required to obtain an encroachment permit for improvements on public right-of-ways prior to receiving a grading or building permit authorizing site work or construction activities on the site.

#### **Building Department Conditions**

45. A building permit is required for all onsite demolition, construction and/or change of occupancy.
46. The applicant will be required to comply with the codes adopted at the time the applicant applies for a building permit. At this time the City of St. Helena utilizes the 2013 Title 24 codes.
47. When submitting plans for a building permit, the plans shall include all documentation listed on the building permit application checklist.
48. The applicant shall provide a construction waste management plan with the building permit application.

49. The plans for construction shall include a checklist for compliance with the California Green Buildings Standards Code, mandatory measures. Provide a reference on the checklist indicating where the mandatory measures can be found on the plans.
50. When submitting plans, the title page shall include all information referenced on the building permit application checklist Title Page requirements.
51. Building Permit application materials and plans shall include any documentation pertaining to special loads applicable to the design and the specified section of the code that addresses the condition; special inspections for any systems or components requiring special inspection; requirements for seismic resistance; and a complete list of deferred submittals at time of application. Any deferral of the required submittal items shall have prior approval of the Building Official however deferral of fire sprinkler design is not allowed.

#### **Fire Department Conditions**

58. Fire sprinklers and fire hydrants shall be installed as required by the Fire Department

#### **4. 830 Pratt Avenue Findings and Conditions of Approval**

- A. DEMOLITION. Pursuant to Municipal Code Section 17.164.050(E), the Planning Commission finds that the Vineyard Lodge 1 (c.1960) is not eligible for listing on the California Register of Historic Resources (CRHR) and because the building is not particularly cohesive with the surrounding agricultural and residential character makes the following findings for the approval of a Demolition Permit:

1. That, based on the public record and testimony presented at a public hearing, the building is determined not to be a significant architectural or historical building.

*The applicant is requesting a permit to demolish the former Marlinda Convalescent Home and what is today known as "Vineyard Lodge 1". The building was constructed c.1960. Following review of available records, consultants, Architectural Resources Group, determined that the subject building proposed for demolition does not meet the Criteria for listing on the California Register of Historic Resources (CRHR) given that it does not exhibit architectural significance, is not associated with any significant themes or persons and is not expected to yield any information important to expand our understanding of history or prehistory. Staff concurs with this determination.*

2. That the demolition does not eliminate elements that are required to maintain the essential character of the neighborhood.

*As a 1960s era convalescent home located in an otherwise agriculture and residential area, the building was not found to be particularly cohesive with the existing environment. Given this, it's demolition is not expected to adversely impact the essential character of the neighborhood. Accordingly, Staff finds that the*

*demolition of the proposed building will not negatively impact a historic resource or existing visual environment.*

- B. DESIGN REVIEW. The Planning Commission determines the project's natural color palette, stepped design, retention of existing trees adjacent to the public right-of-way and the addition of new trees will be compatible with the surrounding character along Pratt Avenue and limit visual impacts such that it would be in compliance with the following Design Review criteria enumerated in Municipal Code Section 17.164.030, and as follows:

1. Consistency and compatibility with applicable elements of the general plan;

*As stated above, the subject project is consistent with General Plan policies 4.3.4, 2.6.2, 2.6.4, 2.6.5 and HE 1.5, 2.1, 2.2, and 2.6 in that the project would consist of infill on an already developed site, would occur in a logical and orderly manner proximate to urban services, and would be of a size and design that is consistent with existing site development. Further, the site would not encroach into or otherwise hinder agricultural activities in the vicinity of the subject site. As a previously developed site within approximately one mile of the Greystone Campus, the project location at 830 Pratt is well suited to accommodate student housing at a higher density and provide a creative solution to the need for affordable student housing. As such, the project is determined to exhibit overall consistency with the intent of the General Plan and Housing Element.*

2. Compatibility of design with the immediate environment of the site;

*The project site is situated at the northern border of St Helena's urban limits where medium density housing development is bordered by agricultural land uses immediately to the north and east. Adjacent development includes the Beringer Winery warehouse building and wastewater treatment facilities. Therefore, the visual character of the project area is comprised of both residential scale single-family residences (south and west) and agricultural uses including processing and storage (north, east, and west) building and facilities.*

*The subject site is currently developed with two dormitory buildings ranging from one to two stories in height. The one-story building will be demolished and the two story building is to be retained. The expansion of the Vineyard Lodge House is generally consistent with what is presently on the site and would not substantially alter the existing relationship of the site to its surroundings or otherwise make the site incompatible with the surroundings. The new construction would be clustered on the site and exhibit defined boundaries and generous vegetative screening. As such, compatibility of the site with its surroundings is found to be maintained.*

3. Relationship of the design to the site;

*As stated above, the site configuration will include a series of four buildings (3 new) clustered around a central courtyard and traversed by a one-way access road. Those buildings with frontage on Pratt Avenue will feature a stepped*

*design and a minimum setback of 20 feet from Pratt Avenue so as to limit visual prominence and provide continuity with other properties proximate to the site, which are developed with similar setbacks. Therefore, given the site constraints, the relationship of the design to the site appears to strike an appropriate balance between function and aesthetics.*

4. Determination that the design is compatible in areas considered by the board as having a unified design or historical character;

*The segments of Pratt Avenue proximate to the subject site do not exhibit a unified or historical character. The surrounding area features residential uses, industrial/agricultural production uses, and vineyards. The proposed design is generally consistent with Vineyard Lodge II and the existing character of the site and would not depart significantly from that existing character. The project is therefore not expected to impact an area having a unified or historical character.*

5. Whether the design promotes harmonious transition in scale and character in areas between different designated land uses;

*The subject buildings with frontage on Pratt Avenue will be stepped in height such that the buildings along Pratt will be two stories in front ( with max height of 29'2") with taller (3-story) portions confined to the rear of the site (max height of 40'2"). Similarly, the buildings will feature a minimum 20' setback from the Pratt Avenue Property line (50' from Pratt Centerline) in an effort to reduce the perceived massing and scale and promote a harmonious transition in scale relative to residential buildings proximate to the site and in relation to the agricultural production facilities nearby. Further, this site serves as a transition from the adjacent agricultural production and warehouse use on the Beringer property to the single family and vineyard uses further down Pratt Avenue.*

6. Compatibility with future construction both on and off the site;

*The project design is contemporary in style, but with traditional detailing. The buildings feature a neutral color palette. The proposed design would not introduce an element that was so unique or exceptional as to make it incompatible with future development on and/or off site.*

7. Whether the architectural design of structures and their materials and colors are appropriate to the function of the project;

*The proposed buildings will be contemporary in style, but feature some craftsman-like details including wood columns and brackets. The building will be supported by an exposed, parge coated foundation. Exterior walls would be clad in a combination of painted clapboard siding and stained red cedar siding and punctuated with clad windows. The buildings would feature articulated roof-lines with asphalt shingles. The proposed color palette includes neutral hues like brown, natural wood, and moss green. The proposed color and materials reflect traditional materials and colors that would help the buildings to more readily blend in with their surroundings. The architectural design, material, and colors are responsive to the needs of the site and appropriate to the function of the project and generally compatible with adjacent buildings and uses.*

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8. Whether the planning and siting of the various functions and buildings on the site create an internal sense of order and provide a desirable environment for occupants, visitors and the general community;

*The proposed site configuration would feature three buildings clustered around a central courtyard. The site would be traversed by a one-way access road with parking clustered around the outer portions of the site, screened with significant amounts of vegetation. As such, the site configuration is expected to provide for a desirable environment that is both functional and aesthetically pleasing to residents and the general community.*

9. Whether the amount and arrangement of open space and landscaping are appropriate to the design and the function of the structures;

*The project proposes a generous level of landscaping and will retain a number of trees at the property frontage to promote screening. The level of landscaping will soften the look of the new buildings and appears to be appropriate for the use and to promote continuity with surrounding properties.*

10. Whether sufficient ancillary functions are provided to support the main functions of the project and whether they are compatible with the project's design concept;

*The project will include interior students commons and dining area as well as an outdoor courtyard and amenity area. In addition, the project will provide alternative forms of transportation to serve the student population and facilitate ease of travel between the subject site and Greystone Campus as well as other destinations. Given the on-site amenities and provision of alternative transportation, the project is expected to provide sufficient ancillary functions to support the functionality of the student dormitory use and which are of a design that is consistent with the overall aesthetic.*

11. Whether access to the property and circulation systems are safe and convenient for pedestrians, cyclists and vehicles;

*Primary automotive access will from Pratt Avenue and Vineyard Road, both of which were found to provide adequate circulation and access to the project site and have been conditioned to be improved to address project specific impacts. Onsite circulation and access is provided via one-way access road off of Vineyard Road and exiting at Pratt Avenue. This access road is expected to provide convenient vehicular site access. In addition, the project will be subject to Mitigation Measure Trans-2, which amongst other things, requires that the applicant introduce a Class II bike lane along westbound Pratt Avenue (northern side) extending from the project site to the intersection of SR 29 (Main Street) and Pratt Avenue and restripe for a fog line along eastbound Pratt (southern side) extending from the project site to the intersection of SR 29 thereby promoting more safe and convenient connectivity for bicyclists. Accordingly, the project is expected to promote safe and convenient access for all types of transportation.*

12. Whether natural features are appropriately preserved and integrated with the project;



*As a previously developed site, the Vineyard Lodge Housing site does not contain any significant natural features with the exception of some Coast Live Oak Trees. To accommodate the proposed buildings, the project will remove two (2) Coast Live Oaks, which pursuant to Mitigation Measure BIO-1, shall be replaced in-kind and at a ratio of three (3) new 15 gallon trees for every one tree removed. A portion of replacement oaks may be accommodated on the Greystone Campus if site constraints are such that all replacement trees cannot be accommodated within the proposed site plan. As such, the project will integrate natural features to the extent possible and where that is not possible, will mitigate accordingly.*

13. Whether the materials, textures, colors and details of construction are an appropriate expression of its design concept and function and whether they are compatible with the adjacent and neighboring structure and functions;

*Please refer to response No. 7.*

14. In areas considered by the board as having a unified design character or historical character, whether the design is compatible with such character;

*Please refer to response No. 4*

15. Whether the landscape design concept for the site, as shown by the relationship of plant masses, open space, scale, plant forms and foliage textures and colors create a desirable and functional environment and whether the landscape concept depicts an appropriate unity with the various buildings on the site;

*The proposed landscape plan will feature a variety of trees, shrubs, and sod. The majority of existing Camphor trees at property frontage will be maintained. The landscape plan will feature 21 plant types which will be distributed throughout the site and promote continuity and unity throughout the site as well as soften the look of paved parking areas around the periphery of the site and provide shade.*

16. Whether plant material is suitable and adaptable to the site, capable of being properly maintained on the site, and is of a variety which is suitable to the climate of St. Helena;

*With the exception of the sod, all proposed plant materials are considered "low" water use plantings and are expected to be adaptable to the St. Helena climate. Further, all plantings on site are required to comply with the City of St Helena Municipal Water Efficient Landscape Ordinance, which regulates landscaping water use.*

17. Whether sustainability and climate protection are promoted through the use of green building practices such as appropriate site/architectural design, use of green building materials, energy efficient systems and water efficient landscape materials.

*As detailed herein, the project will use efficient fixtures and comply with Title 24 building standards. In addition, most landscaping will be comprised of low water use planting and will comply with the City of St Helena Municipal Water Efficient*

*Landscape Ordinance. Further, the project will limit parking so as to avoid inducing vehicular travel demands and Green House Gas production by promoting use of alternative transportation and ride sharing. As such, the project will promote sustainable practices and climate protection.*

C. SETBACK VARIANCE. Pursuant to Municipal Code Section 17.172.050, the Planning Commission makes the following variance findings to support the motion to approve a setback variance:

- (a) A hardship peculiar to the property, not created by any act of the owner, exists. In this context, personal, family or financial difficulties, loss of prospective profits, neighboring violations, are not hardships justifying a variance.

*The currently configured parcel was created in 1971 subject to dedication of a 20 foot strip of land along the northwesterly side of Pratt Avenue, creating a 60 foot right of way. As demonstrated in the applicant's setback variance request, neighboring properties were either (1) not required to dedicate land, or (2) were required to dedicate only a 10 foot strip of land. In addition, the property has a unique triangle shape with its widest and most developable portion immediately adjoining the property line subject to the special Pratt Avenue setback requirement. Literal enforcement of the 36 foot setback requirement from the property line—which encroaches 10-20 feet more into the property than does the property line at neighboring properties—would create a hardship peculiar to the property.*

- (b) The Variance is necessary for the preservation and enjoyment of substantial property rights of the applicant which are possessed by other properties in the same district and in the same vicinity; and that a Variance, if granted, would not constitute a special privilege of the recipient not enjoyed by his or her neighbors.

*Granting a variance would not constitute a special privilege for the property relative to neighboring properties. Six neighboring homes on the northwesterly side of Pratt Avenue are situated within the special 36 foot setback, none of which were required to dedicate a 20 foot strip of land like that of the subject property. The proposed development plan will exhibit a greater setback than what currently exists for the Vineyard Lodge 1 building (proposed for demolition). In light of the above, it is found that granting a setback variance is necessary for the preservation and enjoyment of the applicant's substantial property rights that are possessed by nearby properties that are developed in similar proximity to the northwestern boundary of Pratt Avenue.*

- (c) The authorization of the Variance will not be of substantial detriment to adjacent properties, and will not materially impair the purpose and intent of this Chapter or the public interest, nor adversely affect the General Plan.

*Authorization of the Variance will not be of substantial detriment to adjacent properties, nor will it materially impair the public interest, as the new developed portion of the property will be located further from Pratt Avenue than the existing Vineyard Lodge I, proposed for demolition. In addition, large mature trees along a substantial portion of the site frontage and along its other borders will screen the views of the new dormitory development. Recognizing the unique nature of the property and granting a Variance does not impair the purpose and intent of the Code's Variance chapter.*

*The chapter's stated purpose is, in part, to allow for deviation from a strict application of the Code in the event that a property exhibits an unusual shape or other exceptional characteristic, and as a result would be subjected to practical difficulties or undue hardship in their development. Authorization of the Variance is consistent with St. Helena's longstanding efforts to manage growth by encouraging further development of already developed parcels, rather than removal of vineyards within City limits, and would not adversely affect the General Plan. The project's 123-bed expansion to serve a projected enrollment expansion of 100 students will allow students who currently compete for housing with members of the St. Helena workforce to move into student dormitories; freeing up that housing would benefit St. Helena families and employees.*

- (d) The condition or situation of the specific piece of property for which the Variance is sought is not so general or recurrent in nature as to make reasonably practicable the formulation of a general regulation for such condition or situation

*The property has a unique shape and was required to dedicate a larger strip of land relative to other nearby properties subject to the 36 foot special setback. Accordingly, the property's condition is not so general or recurrent in nature to make formulation of a general regulation addressing the issue reasonably practicable.*

- (e) The Variance and any buildings or structures permitted by the Variance will not be detrimental to the public health, safety and welfare of the community.

*Neither the Variance nor structures permitted by it will be detrimental to community public health, safety, and welfare. Granting the Variance will allow development of new student dormitories further removed from Pratt Avenue than the existing Vineyard Lodge I building. The applicant has designed the dormitory buildings to be partially screened by large, mature trees located along the site's borders. Reducing parking spaces on the site and restricting supply of parking permits for student dormitory residents will remove vehicles from the City's streets, particularly St. Helena Highway. Student residents will have ample transportation alternatives: the frequent shuttle service between the property and the Greystone Campus, free access to on-site bicycles and the new bicycle lane provided by the Culinary Institute of America along Pratt Avenue, and the St. Helena shuttle and VINE transportation. The parking Variance further*

*discourages private automobile trips by Culinary Institute of America students in and around St. Helena, and therefore confers a benefit to the community.*

D. PARKING VARIANCE. Pursuant to Municipal Code Section 17.172.050, the Planning Commission makes the following variance findings to support the motion to approve a parking variance:

- (a) A hardship peculiar to the property, not created by any act of the owner, exists. In this context, personal, family or financial difficulties, loss of prospective profits, neighboring violations, are not hardships justifying a variance.

*Imposition of the Code's parking requirement for a "rooming, boarding, or lodging house" or "hotel" in the student dormitory context would create a hardship peculiar to the property. Rooming, boarding, or lodging houses traditionally serve individuals unaffiliated with a college or university, who in a community such as St. Helena likely would require use of an automobile for daily activities. Similarly, hotels in St. Helena traditionally serve visitors exploring the region's amenities by private automobile. Requiring one parking space for each guestroom in those contexts is justifiable given the expected patterns of vehicle use, and the potential that failure to provide ample parking spaces could negatively affect neighboring properties. The Culinary Institute of America's students, on the other hand, are offered shuttle service for their daily trips to and from the Greystone Campus, do not require a car for the vast majority of their daily school-related activities, and are offered on-demand car rental for personal trips as well as access to free bicycles on site. Imposition of a one space per dormitory room requirement would create a hardship by dramatically changing the project as proposed and would require elimination of an open quad gathering area and potential reduction in number of student beds in favor of a hardscape parking lot.*

- (b) The Variance is necessary for the preservation and enjoyment of substantial property rights of the applicant which are possessed by other properties in the same district and in the same vicinity; and that a Variance, if granted, would not constitute a special privilege of the recipient not enjoyed by his or her neighbors.

*The Variance would not constitute a special privilege for the property relative to neighboring properties, none of which are developed with student dormitories that require limited on-site parking. Given the unique and limited travel patterns of student residents of the dormitory, with the Variance both the property and neighboring properties will be subject to minimum parking requirements tailored to actual expected travel patterns and parking space demand, and neither the property nor neighboring properties will be required to provide unnecessary parking spaces reducing enjoyment of substantial property rights.*

- (c) The authorization of the Variance will not be of substantial detriment to adjacent properties, and will not materially impair the purpose and intent of this Chapter or the public interest, nor adversely affect the General Plan.

*Authorization of the Variance will not be of substantial detriment to adjacent properties, nor will it materially impair the public interest. The Culinary Institute of America will provide shuttle and on-demand car rental service, will impose a highly restrictive permit system both at the property and the Greystone Campus discouraging students without assigned parking from bringing cars to St. Helena, will provide free bicycles for use by students, and is amenable to restrictions on parking in the surrounding area to benefit nearby residents by discouraging student parking off the property. The Variance serves the public interest by effectively removing vehicles from City streets, particularly St. Helena Highway, encouraging environmentally-friendly and efficient transportation to and from the Greystone Campus. The parking Variance does not impair the purpose and intent of the Code's Variance chapter. The chapter's stated purpose is, in part, to allow variation from strict application of the Code where extraordinary situations or conditions mean that literal enforcement would involve practical difficulties or would cause undue hardship. Here, requiring unnecessary parking spaces would work against the public interest and cause undue hardship to the property and the school. Authorization of the Variance is consistent with City and regional policies encouraging use of alternate modes of travel, both to reduce harm to the environment and to take traffic off local roads, and would not adversely affect the General Plan. These policies and goals are consistent with the project's shuttle service and free bicycle program that reduce the need for parking and provides further support for the parking Variance.*

- (d) The condition or situation of the specific piece of property for which the Variance is sought is not so general or recurrent in nature as to make reasonably practicable the formulation of a general regulation for such condition or situation

*Formulation of a general regulation is not reasonably practicable given the lack of other student dormitories in the City, the targeted transportation options provided to the Culinary Institute of America's students, and consistency with parking reduction practices at other California campuses as discussed in the Crane Transportation Memo that justify the Variance.*

- (e) The Variance and any buildings or structures permitted by the Variance will not be detrimental to the public health, safety and welfare of the community.

*Neither the Variance nor structures permitted by it will be detrimental to community public health, safety, and welfare. Granting the Variance will allow development of new student dormitories further removed from Pratt Avenue than the existing Vineyard Lodge I building. The applicant has designed the dormitory buildings to be partially screened by large, mature trees located along the site's*

*borders. Reducing parking spaces on the site and restricting supply of parking permits for student dormitory residents will remove vehicles from the City's streets, particularly St. Helena Highway. Student residents will have ample transportation alternatives: the frequent shuttle service between the property and the Greystone Campus, free access to on-site bicycles and the new bicycle lane provided by the Culinary Institute of America along Pratt Avenue, and the St. Helena shuttle and VINE transportation. The parking Variance further discourages private automobile trips by Culinary Institute of America students in and around St. Helena, and therefore confers a benefit to the community.*

E. Pursuant to Municipal Code Section 17.124.030 (H), the Planning Commission further finds that the Vineyard Lodge Housing Site constitutes an "unlisted use" and determines that based on the particularities of the proposed project, including the dormitory-use, established shuttle program, and provision of on-demand rental cars and bicycles, the provision of 69 designated parking spaces is sufficient to serve the project site.

F. USE PERMIT. Pursuant to Municipal Code Section 17.168.050, the Planning Commission finds that The Vineyard Lodge dormitories are appurtenant to the CIA at Greystone and provide affordable and convenient lodging for students enrolled in a culinary program. As conditioned, it is expected that the project would operate in an acceptable manner and therefore, the Planning Commission makes the following Use Permit findings to support the motion to approve the use permit:

1. That the proposed use would not generate odors, fumes, dust, light, glare, radiation or refuse that would be injurious to surrounding uses or to the community.

*The site operation is expected to be substantially similar to that currently existing. There is no expectation that the expansion of the student housing would generate odors, fumes, dust, light, glare, radiation or refuse that would be injurious to surrounding uses or to the community.*

2. That the proposed use would not generate levels of noise that adversely affect the health, safety, or welfare of neighboring properties or uses.

*At project operation, the onsite land use at the Vineyard Lodge Housing Site and associated noise environment will continue to be typical of a multi-unit development (dormitories) and subject to the City's noise exposure standards. The expansion of the Vineyard Lodge Housing site is not expected to introduce a substantial permanent increase in the ambient noise environment due to activities onsite or as a result of stationary or mobile sources. The noise generating elements of the proposed project such as outdoor conversations, mechanical equipment, the operation of landscaping equipment, car engines and car doors would be similar to the existing noise environment present on-site and in the vicinity. The project is expected to introduce noise elements at levels that are generally consistent with the ambient noise conditions.*

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3. That the proposed use would not generate traffic noise in excess of the "normally acceptable" range identified in the General Plan.

*As detailed in the Noise Impact Study (Appendix L of the IS/MND), the project is expected to add less than 8 trips to Pratt Avenue during the a.m. and p.m. peak hours. This would constitute a negligible increase in traffic noise of less than 0.5 dB which falls well below the threshold of a perceptible change of 3 dB. As such implementation of the proposed project will not substantially increase traffic noise in the area.*

4. That the proposed use would not make excessive demands on the provision of public services including water supply, sewer capacity, energy supply, communication facilities, police protection, and fire protection.

*The Project will not result in substantial adverse impacts associated with any public facilities or services. The project site is located adjacent to the urban limit line and is well served by existing public utilities and services. The project will not generate a substantial increase in demands that warrant the expansion or construction of new public facilities. The project site is also located proximate to the police and fire stations. Additional fire service and police calls may occur as a result of the project. However, the project will be subject to the payment of development impact fees, including the Public Safety Impact Fee which funds equipment and facilities' costs for Police and the Fire Departments that may go towards vehicles, capital equipment, and building improvements so as to maintain a high level of public safety. Accordingly, the project will not place excessive demands on any public services.*

5. That the proposed use would provide adequate ingress and egress to and from the proposed location.

*The project's internal circulation plan has been reviewed and meets all requirements of the St. Helena Public Works & Utilities and Fire Departments. Site circulation was determined to be adequate, including sufficient street widths to allow for fire truck turn around and sufficient access to residential buildings. Therefore, ingress and egress is considered adequate.*

6. That allowing the proposed use would not conflict with the City's goal of maintaining the economic viability of a local serving economy.

*The proposed student housing is appurtenant to the Culinary Institute of America Greystone Campus. The housing would not displace local serving uses nor impair the City's viability of maintaining a local serving economy.*

7. That the proposed use would be compatible with surrounding land uses and would not conflict with the purpose established for the district within which it would be located.

*The Vineyard Lodge site exhibits a land use and zoning designation of PQP: Public-Quasi-Public. The PQP zoning designation does not prescribe specific development standards, but rather stipulates that all projects within the PQP zoning district be subject to a conditional use permit and that development standards shall be established through the use permit review process. These regulations help guarantee that incompatible development and/or activities can be avoided by requiring such projects be held to a high level of scrutiny and are vetted through the public review process, CEQA review, and would be conditioned accordingly. Given that the proposed use serves an infill and expansion of an existing use there is no expectation that the proposed project would introduce an element that would conflict with the intent of the PQP zoning designation.*

8. That the proposed use would not be in conflict with the City's General Plan.  
*As detailed, herein the project would comply with applicable General Plan policies.*
9. That the proposed use would not be injurious to public health, safety, or welfare.  
*The proposed project consists of infill student housing that would operate in a manner substantially similar to the existing Vineyard Lodge Housing. As such, the project would not be injurious to health, safety, or welfare.*
10. That granting the use permit would not set a precedent for the approval of similar uses whose incremental effect would be detrimental to the City or would be in conflict with the General Plan.

*Use permits are considered on a case by case basis and based on the specific merits of a given project. Accordingly, the granting of this use permit would not influence future decisions or otherwise set a precedent.*

11. That, as demonstrated on a detailed plan submitted by the applicant, adequate off-street parking to accommodate the long term parking needs of employees and business owners and customers is available.

*The applicant proposes to provide a level of parking commensurate with the demand exhibited by the current residents of Vineyard Lodge Housing Site. At present, 31 percent of residents hold parking permits. It is reasonably expected that this level of demand would continue with implementation of the proposed project which would translate to 69 designated spaces for the total proposed resident population of 224 students. .*



*There is no reason to believe that the student to vehicle ratio would substantially change under the proposed project, namely because (1) the CIA retains authority to issue or not issue parking permits, (2) the project will be subject to a condition of approval stipulating that it may not issue more than 69 parking permits, and (3) the site is uniquely operated in that it provides frequent reliable transportation to and from the Greystone Campus and to other locations, as needed, will provide three on-demand rental cars, and per mitigation measure LU-1, will be required to introduce a scalable bike share program that may be expanded as demand necessitates. As such, the project is expected to be able to accommodate long term parking needs for residents of the site.*

12. That the capacity of surrounding streets is adequate to serve the automobile and delivery truck traffic generated by the proposed use.

*As detailed in the Traffic Impact Report (Appendix Q of the IS/MND), the project's trip generation is minimal (approximately 4 trips during am and pm peak hours) and therefore the capacity of streets is presumed to be adequate.*

- G. The Planning Commission approves the demolition permit, design review, variances, and use permit for the above-described project with the following conditions of approval. The project shall be in conformance with all city ordinances, rules, regulations and policies in effect at the time of issuance of a building permit. The conditions noted below are particularly pertinent to this permit and shall not be construed to permit violation of other laws and policies not so listed.

#### **Conditions of Approval**

1. Project approvals shall be vested within one (1) year from the date of final action. A building permit for the use allowed under this approval shall have been obtained within one (1) year from the effective date of this action or the approval shall expire, provided however that the approval may be extended for up to two (2) one-year periods pursuant to the St. Helena Municipal Code, Section 17.08.130, Extension of Permits and Approvals. Any request for an extension of this approval shall be justified in writing and received by the Planning Department at least thirty (30) days prior to expiration.
2. The approvals shall not become effective until fourteen (14) calendar days after approval, providing that the action is not appealed by the City Council or any other interested party within that 14-day period.
3. All required fees, including planning fees, development impact fees, residential in-lieu housing fees, building fees, toilet retrofit fees, and St. Helena Unified School District fees shall be paid prior to issuance of a building permit. Fees shall be those in effect at the time of the issuance of the building permit.
4. Upon approval of Resolution XX-XX, the Applicant shall provide the Planning Department with the Notice of Determination Fee required by Fish and Wildlife Code Section 711.4(d). The fee payment shall be made by check payable to the

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Napa County Clerk and in the amount required and published by the Napa County Clerk for such fee.

5. All Mitigation Measures enumerated in the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program are incorporated by reference and made conditions of approval.
6. Prior to issuance of any construction permits, these conditions of approval and the Mitigation and Monitoring and Reporting Program shall be included with the plan set. A copy of the approved plans shall be maintained on site when construction activities are underway.
7. Minor modifications to approved plans may be approved by the Planning Director insofar as they are in substantial conformance with this approval.
8. Pursuant to St. Helena Municipal Code Section 17.08.110, this permit shall run with the land and shall be binding upon all parties having any right, title or interest in the real property or any part thereof, their heirs, successors and assigns, and shall inure to their benefit and benefit of the City of St. Helena.
9. The primary purpose of this review is for compliance with the General Plan and Zoning Ordinance. The property owners or their designee shall be responsible for meeting with the Building Official, Fire Inspector and or Public Works Department to review compliance with Building Codes, Fire Codes and specific Public Works Standards including fire protection systems and any applicable accessibility standards of Title 24.
10. Construction shall be in compliance with plans submitted and reviewed by the Planning Commission on March 7, 2017, except as modified herein.
11. The site shall be kept clear at all times of garbage and debris. No outdoor storage is permitted.
12. A final lighting plan delineating building mounted lights shall be reviewed and approved by the Planning and Community Improvement Director prior to building permit issuance.
13. Trash bins shall not be visible from public right-of-way. The trash enclosure(s) will be constructed of opaque materials and be of sufficient size to permit the storage, removal and replacement of standard commercial size trash bins. No collection, storage or stacking of garbage, trash and refuse is permitted outside the trash enclosure.
14. All plantings shall be maintained in good growing condition. Such maintenance shall include, where appropriate, pruning, mowing, weeding, and cleaning of debris and trash, fertilizing and regular watering. Where necessary, plantings shall be replaced with other plant materials to insure continued compliance with applicable landscaping requirements, Irrigation systems shall be maintained in sound operating condition with heads periodically cleaned and replaced when missing to ensure efficient watering and to maintain good health and vitality of landscape materials.

15. No signage is approved by this permit. A separate sign permit in compliance with the Municipal Zoning Code shall be obtained prior to installation of signage.
16. Property owners shall recognize that there exists a right to farm properties within the district and in the vicinity of the district. There is a good faith expectation that no complaints will occur regarding legal, normal agricultural activities on properties in the district or in the vicinity of the district. Such activities may include day or night disbursement of chemicals, and creation of dust, noise, or fumes.
17. In any action or proceeding to attack, challenge, invalidate, set aside, void or annul the City's approval of applicant's Project, in whole or in part, applicant shall defend, at its own expense and without any cost to the City, and with counsel acceptable to the City, and shall fully and completely indemnify and hold the City, its agents, officers, and employees harmless from and against any and all claims, causes of action, damages, costs, attorney's fees and liability of any kind, so long as the City reasonably promptly notifies the applicant of any such claim, action, or proceedings and the City cooperates fully in the defense of the action or proceedings.

**Planning Department Conditions**

18. As applicable, the permittee shall comply with any and all previous conditions of approval for the Vineyard Lodge Housing Site except as they may be explicitly modified by this action. To the extent there is a conflict between previous conditions of approval enumerated in Resolution No. 2004-33 or 2008-75 and these conditions of approval, these conditions shall supersede the previous permit and associated conditions.
19. Rental and/or occupancy of Vineyard Lodge dormitories shall be limited only to students who are actively enrolled at the Culinary Institute of America at Greystone in an Associate, Bachelor's, Master's and/or other Certificate Degree Programs with the exception that an on-site manager(s) shall reside on site consistent with State Housing Law, Title 25. The student's length of stay shall be commensurate with the respective degree program.
20. The Applicant shall provide a detailed Transportation Plan that describes the operation of (1) the shuttle service (2) the rental car service (3) parking permits for individual vehicles and (4) the specifics of the on-demand bike program as they relate to the Greystone Campus and Vineyard Lodge Housing Site. The Plan shall be subject to review and approval by the Planning and Community Improvement Director. A copy of the approved shall be provided and kept in the hard copy and digital project file and made available to the public as requested.
21. Parking Permits issued to students who are actively enrolled at the Culinary Institute of America at Greystone for the Vineyard Lodge Housing Site shall not exceed 69 permits at any one time.
22. No off-street parking is allowed on the Southside of Pratt Avenue, east of the Railroad Tracks.

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23. The applicant shall obtain all required approvals in writing for communal kitchen facilities from the Napa County Department of Environmental Management. A copy of the approval shall be provided to the City and added to the project file.
24. Prior to issuance of building permit, the applicant shall enter into a Joint Water Use Agreement with the City and applicable to 830 Pratt Avenue and 2555 Main Street. The Joint Agreement shall authorize a maximum water allocation of 23.1 acre feet/year to be utilized by the two sites. The Joint Agreement shall include enforcement provisions and penalties if the allowance is exceeded in a given year. Said agreement is subject to the approval of the St Helena City Council.
25. Any significant change(s) to the operation of the approved use, including a substantial change in the operational characteristics of the site, intensity, or type(s) of uses shall require amendment to this use permit.

**Public Works Department Conditions**

26. Approval of this project shall be subject to the requirements of, and all improvements shall be designed and constructed in accordance with, the most current version at the time of improvement plan submittal, Caltrans Standards and Specifications, the City of St. Helena Municipal Code, the St. Helena Water and Sewer Standards, the St. Helena Street, Storm Drain and Sidewalk Standards, and all current federal, state and county codes governing such improvements.
27. For any improvements outside the existing building envelope, a grading and drainage plan showing topographic data, all easements, infrastructure onsite and directly adjoining, and an erosion control plan shall be submitted for review and approval by the City Engineer prior to the issuance of a building permit. If the project entails more than 50 cubic yards of soil disturbance, 10,000 square feet of disturbance area, a cut or fill of 3 feet or more, or alteration of any drainage pattern, a grading permit shall be required.
28. Drainage needs to be routed to prevent inundation of neighboring properties. Grading and/or site improvement plans shall show how 2-year and 10-year storm flows shall be infiltrated on site and/or diverted at the property lines to prevent inundation of neighboring properties. The applicant shall submit a drainage and hydrology analysis for the project impact, including downstream erosion potential, to the City of St. Helena Public Works Department with the Improvement Plan submittal in accordance with City of St. Helena, Napa County and State of California codes in effect at the time of improvement plan submittal.
29. Erosion and sediment control plans shall conform to the latest State and City codes at a minimum
30. The applicant shall adhere to the latest Water Agreement with the City and shall incorporate water conservation practices into the proposed project per the Water

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Availability Analysis prepared by Summit Engineering, dated September 2, 2016. Any and all non-conforming appliances and plumbing fixtures shall be removed from the premises. The water conservation requirements shall be replicated in full on the architectural plans.

31. A detailed Post-Construction Stormwater Control Plan (SWCP) that identifies and sizes all permanent post-construction stormwater treatment BMPs shall be prepared and submitted for review approval. The Plan shall be prepared in accordance with the latest edition of the *Bay Area Stormwater Management Agencies Association (BASMAA) Post-Construction Manual* and the requirements of the State Water Resources Control Board Phase II Municipal Separate Storm Water System (MS4) General Permit (Order 2013-0001 DWQ).
32. A Post Construction Stormwater Operations and Maintenance Plan that provides a color-coded plan sheet showing all storm drain and water quality infrastructure that is to be maintained, along with detailed instructions and schedules for the ongoing maintenance and operation of all post-construction stormwater BMPs shall be submitted for review and approval by the City Engineer. Once approved, the property owner shall enter into an agreement with the City that provides the terms, conditions, and security associated with the ongoing requirements of the Post Construction Stormwater Best Management Practices.
33. Prior to Certificate of Occupancy, the Applicant shall enter into and record a Post-Construction Stormwater Operations and Maintenance Agreement with the City.
34. If the project includes 500 square feet or more of new landscaping and/or 2,500 square feet or more of rehabilitated landscape, the proposed landscaping shall comply with the State's Model Water Efficient Landscape Ordinance (MWEL0).
35. A detailed Soils Investigation/Geotechnical Report shall be prepared and submitted for review. The report shall address, at a minimum, potential for liquefaction, R-values, expansive soils and seismic risk. The improvement plans shall incorporate all design and construction criteria recommended in the Geotechnical Report.
36. Unless otherwise explicitly permitted, all existing wells, septic tanks/systems and/or underground fuel storage tanks shall be abandoned under permit and inspection of Napa County Department of Environmental Services or other designated agency. If there are none, the project engineer shall provide a letter describing the scope of the search done to make this determination.

37. Site plan shall show the location of any trees within the project area. Provide a tree protection plan for approval by the Public Works Director prior to approval of the building permit. The plan shall be coordinated with any civil grading/drainage/improvement plans.
38. The Applicant shall keep adjoining public streets free and clean of project dirt, mud, materials, and debris during the construction period, as is found necessary by the City Engineer.
39. The developer shall underground all on-site utility lines per St. Helena Municipal Code. The cost of undergrounding shall be the responsibility of applicant.
40. Due to the economic and engineering infeasibility of undergrounding regional serving overhead power lines, such existing lines may remain on overhead power poles.
41. Provide details of any and all proposed fencing, gates and/or walls on all plans submitted for building permit review.
42. Any new and modified existing water laterals, meters and backflow prevention devices shall be required and constructed in accordance with the current requirements of the City of St. Helena's Water Standards and the California Department of Health Standards. Existing meter boxes located within a driveway shall be retrofitted with a traffic-rated box. New laterals shall be located perpendicular to the water main and outside any driveway/drive aisle.
43. Remodels or new construction which requires fire sprinklers shall install an appropriately-sized water service with appropriate backflow and meter devices prior to Certificate of Occupancy. Fire system calculations shall be submitted with the Grading and Drainage Plan to verify fire service lateral and meter sizing. Deferred submittals are not accepted.
44. No construction shall commence until adequate access to fire water supply is available to building sites, and the Fire Chief shall ensure adequate access to fire water supply prior to issuance of building permits.
45. In order to confirm the theoretical assumptions in the provided sewer capacity study, the applicant is required to perform 7-day flow monitoring at the downstream sanitary sewer manholes (No. 6-5 and No. 6-18) to verify that the existing sewer pipe has adequate capacity to accommodate the proposed additional flows prior to building permit approval. Peak sewer flows will not be allowed to exceed 2/3 full pipe. If insufficient capacity is available at the site and with the current infrastructure, a new sanitary sewer must be constructed with adequate capacity by the owner as a condition of the site development.

46. Construct frontage improvements in accordance with the *Frontage Improvement Plan* prepared by Summit Engineering, dated December 7, 2016. Said improvements shall include a full with grind and overlay of 0.10 feet and a cross section consisting of a minimum of 8' parallel parking, 5' bike lane, and 12' lanes (east and west).
47. Trash areas, dumpsters and recycling containers shall be enclosed and roofed per State and County standards to prevent water run-on to the trash area and water runoff from the area, to contain litter and trash so that it is not dispersed by the wind or run-off during waste removal. In the event that wine or food is disposed in these areas, the enclosed trash area shall drain to the sanitary sewer system. An area drain connected to the sanitary sewer shall be installed in the enclosure area and a structural control such as an oil/water separator or sand filter shall be included. No other area shall drain into the trash enclosure. A sign shall be posted prohibiting the dumping of hazardous materials into the sanitary sewer.
48. The applicant shall repair all public improvements that are damaged by the construction process in accordance with the City Water/Sewer/Street/Storm Drain/Sidewalk Standards prior to Certificate of Occupancy.
49. Existing streets being cut by new utility services will require edge grinding and an A.C. overlay per City standards, extent to be determined by the Public Works Department.
50. The applicant shall be required to obtain an encroachment permit for improvements on public right-of-ways prior to receiving a grading or building permit authorizing site work or construction activities on the site.

#### **Building Department Conditions**

51. A building permit is required for all onsite demolition, construction and/or change of occupancy.
52. The applicant will be required to comply with the codes adopted at the time the applicant applies for a building permit. At this time the City of St. Helena utilizes the 2013 Title 24 codes.
53. When submitting plans for a building permit, the plans shall include all documentation listed on the building permit application checklist.
54. The applicant shall provide a construction waste management plan with the building permit application.
55. The plans for construction shall include a checklist for compliance with the California Green Buildings Standards Code, mandatory measures. Provide a

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reference on the checklist indicating where the mandatory measures can be found on the plans.

56. When submitting plans, the title page shall include all information referenced on the building permit application checklist Title Page requirements.

57. Building Permit application materials and plans shall include any documentation pertaining to special loads applicable to the design and the specified section of the code that addresses the condition; special inspections for any systems or components requiring special inspection; requirements for seismic resistance; and a complete list of deferred submittals at time of application. Any deferral of the required submittal items shall have prior approval of the Building Official however deferral of fire sprinkler design is not allowed.

**Fire Department Conditions**

58. Fire sprinklers and fire hydrants shall be installed as required by the Fire Department.

I HEREBY CERTIFY that the foregoing demolition permit, design review, and use permit for 2555 Main Street, and the foregoing demolition permit, design review, variances, and use permit for 830 Pratt Avenue were duly and regularly approved by the Planning Commission of the City of St. Helena at a regular meeting of said Planning Commission held on March 7, 2017 by the following roll call vote:

**AYES:**

**NOES:**

**ABSENT:**

**ABSTAIN:**

APPROVED:

ATTEST:

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Grace Kistner  
Chair, Planning Commission

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Noah Housh  
Planning Director

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**From:** Elizabeth  
**To:** [Lilly Bianco](#)  
**Subject:** CIA Dorm Expansion  
**Date:** Tuesday, February 21, 2017 5:14:08 PM

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Hi Ms. Bianco!

I received a flyer on my door regarding the CIA Dorm Expansion project on Pratt. I am at 1745 Crinella-although I am a block removed from Pratt, I do spend significant time walking there and also use Pratt/Main and Pratt Bridge (when open) for approximately 90% of my entrance and exit from our neighborhood.

A couple of thoughts I have had over the last year regarding the area that I hope to be addressed are:

Will the additional student cars be parking on street or in a lot? If on street-What is proposed to discourage and also clean-up the ridiculous amount of trash that is already left all over the ground around the existing dorms/street parking? Will the CIA provide ongoing street clean-up? Why aren't they already? Pratt will almost certainly become more tourist frequented once the cross Main hotel is completed. The trash is a blight on our city for both tourists and locals.

Which brings me to my next thought, with the soon to follow hotel traffic AND the proposed expansion of CIA Dorms-a traffic light will definitely be needed at the cross of Main and Pratt...it is already very difficult to make even a right hand turn from Pratt to Main due the short red zone prior to the northbound side (and the increase in speed in this area) when there is even one car parked on street directly behind the red zone-very difficult to see what's coming-even in a high profile vehicle! Making a left-hand turn southbound cross traffic is impossible-with the addition of the slight rise in street toward tree tunnel. Problems have increased substantially with just the construction workers vehicles parked in the area-this will be total chaos once hotel and CIA traffic are added in...not to mention the huge amount of foot traffic that will also be attempting that dangerous crossing.

Unfortunately I am unable to attend the Planning Committee meeting tonight to hear all sides of the issues-thank you so much for your consideration in all of this and the possible duplicate comments.

Elizabeth Clough  
 1745 Crinella Drive  
 Saint Helena

Sent from my Verizon, Samsung Galaxy smartphone

**From:** Jesse Clifton  
**To:** [Lilly Bianco](#)  
**Subject:** Regarding the CIA dorm expansion on Pratt avenue  
**Date:** Tuesday, February 21, 2017 5:34:17 PM

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It is my opinion that the CIA should be given the same treatment locals have generally been given when trying to get their own projects facilitated. Historically, a normal small person, home builder, or small spec house investor may as well throw their money on a Craps table as get much of any understanding and help from city of St. Helena planning department. Normal legal uses are regularly interfered, significantly diminished or not allowed. Any deviation from city ordinance/law would be laughable for most. Money talks, we can see that by the current and ugly hotel project and I'm afraid this hearing will be a mere formality. There are trash and parking issues already on Pratt. If expansion is allowed extra traffic will make the Pratt intersection even more dangerous. A light is needed just with hotel construction traffic and pedestrians already. Visibility is bad there as you should know. Please treat us all with equal respect and consideration.

Jesse Clifton

St. Helena Neighbor and Frustrated Napa Co., resident.

**From:** Kenneth Larsen  
**To:** [Lilly Bianco](#)  
**Subject:** CIA expansion  
**Date:** Wednesday, February 22, 2017 9:50:57 AM

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As long time residents of St Helena who live close to the present dormitories, we are not in favor of the CIA expanding to allow for more students.

Ken and JoAnn Larsen  
1766 Crinella Dr.

Sent from my iPhone



**CIA RESPONSE TO ERRONEOUS CLAIMS MADE IN OPPOSITION TO  
THE PRATT AVENUE STUDENT HOUSING**

Dear Chairperson Kistner, and Commissioners:

We recognize you received a large amount of written information and verbal testimony regarding this Project and that some of that information was confusing, and we believe erroneous. We thought it would be helpful to correct some of the factual errors that were presented to the Commission to help you accurately evaluate the Project's impacts.

**1. CLAIM THAT ACCESS ROAD IS 16' WIDE, DANGEROUS, AND ILLEGAL**

As Planning Director Housh clarified at the meeting, the Project's Access Road is the Vineyard Road located along the easterly-side of the property on the next door Treasury Parcel. The Vineyard Road is 25' wide and a two way road. The Planning Department determined that the 25' width requirement set forth Section 17.124.070(e) was applicable to the Project. Moreover, the Reciprocal Easement Agreement between the CIA and Treasury requires that the Vineyard Road be located a minimum of 7' from the end of the vineyard rows and without a curb to accommodate tractor turns. As a result, there will be a minimum clearance of 32' (and generally more) along the Vineyard Road for traffic to travel in an emergency.

The numerous references to the 16' Access Road were incorrect and misleading. Rather, there is a 16' one-way exit driveway that traverses the site and takes traffic to Pratt Avenue on the westerly side of the site. This driveway actually expands to 18' in the vicinity of the parking spaces to allow parked cars to maneuver. As noted by the Planning Director, the arguments regarding the Access Road "conflated" these two entirely different roadways.

**2. CLAIM THAT THE PROJECT WOULD CAUSE ADVERSE IMPACTS ON ST. HELENA'S SEWER SYSTEM.**

The following is a bullet point summary explanation of the non, or minimal, impact that the Project will have on the City's sewer collection system and wastewater treatment facility.

**Collection System**

- The existing pump station at the Vineyard Lodge discharges wastewater to the City's gravity sewer system at a manhole on Pratt Ave. The existing system discharges wastewater to the City sewer at a flowrate of 30 gallons per minute.
- The proposed pump station at the Vineyard Lodge will use the same discharge pump, and continue to discharge wastewater to the City's sewer system at 30 gallons per minute.

- Since there will be no increase in wastewater flowrate from the Vineyard Lodge, there will be no increase in the existing peak flow of the City's sewer between Pratt Ave and the Crinella Pump Station as a result of the Project. Maintaining the same flowrate mitigates any impact from the proposed Project on the capacity of City's sewer system.
- It is also very important to note that the current Vineyard Lodge system discharges wastewater as it is produced, following conventional patterns of wastewater flow which peak in the morning and in the evening when residential water use is at higher levels. This coincides with periods of expected high wastewater flow from the other residential connections contributing to the Crinella pump station.
- The proposed Project will store wastewater as it is produced, and then discharge it to the City sewer during off-peak hours late at night/early in the morning and during the middle of the day. These times coincide with periods of expected lower flow from the residential connections contributing to the Crinella pump station.
- Discharging wastewater during these periods of lower flow will actually remove 30 gallons per minute of wastewater flow from the City sewer during times of peak flow, decreasing the overall peak flowrates in the system resulting from this Project.

#### Wastewater Treatment Facility

- Though not a requirement for the Project, the CIA has chosen to provide septic tank treatment for all wastewater produced at the Vineyard Lodge.
- All septic tanks will be sized per Uniform Plumbing Code requirements for septic systems.
- The treatment provided by the septic tanks will reduce pollutants in the wastewater by an average of 60-70% compared to typical residential wastewater, minimizing the amount of treatment required at the wastewater treatment facility.

### 3. CLAIM THAT SUBMITTED PHOTOS ESTABLISHED THAT THE PROJECT WOULD HAVE AN ADVERSE VISUAL IMPACT ALONG PRATT AVENUE.

Mr. Hinds submitted several photos that purported to show that the deciduous trees along the Project perimeter did not provide sufficient screening. These photos were taken from private property, not from the street where visual impacts on Pratt Avenue traffic could be measured. Further, they were taken without accounting for new plantings at the 5th year of maturity as required for the Visual Impact Analysis. Lastly, they were taken and submitted without compliance with the Bureau of Land Management criteria that staff determined to be "the most technical visual impact assessment familiar to staff." The visual impact photos submitted by the CIA conformed to the standards required by staff.

### 4. CLAIM THAT THE MUNICIPAL CODE REQUIRES THE SAME PARKING REQUIREMENT FOR A DORMITORY AS A HOTEL BASED ON THE LANGUAGE IN THE MUNICIPAL CODE.

The "Definitions" section of the Municipal Code, Section 17.04.160 defines Hotel, generally as: "Hotel" means any building or portion thereof containing six or more guest rooms

used or intended or designed to be used, let or hired out to be occupied ... and shall include hotels, lodging and rooming houses, dormitories, public and private clubs and any such building of any nature whatsoever so occupied, designed or intended to be so occupied except jails, hospitals, ... ." But, Municipal Code Section 17.24.030 is the Code section that specifies the Parking Requirements imposed on Projects "residential" in nature, and differentiates among these categories included within the definition of Hotel.

The relevant subsections relating to multi-occupant facilities are:

Subsection 17.24.030 (A)(3). "Rooming, boarding, or lodging house: two spaces for the resident owner plus one space for each guest room".

Subsection 17.24.030(A)(4). "Hotel, motel, apartment hotel, and club: one space for each individual guest room, suite, or sleeping or living unit. Additional parking shall also be required for ancillary uses such as restaurants".

Subsection 17.24.030(A)(5). "Mobilehome parks: two spaces shall be provided for each mobilehome space, with at least one on the mobilehome space and the second within one hundred fifty (150) feet of the mobilehome space. Guest parking in a separate designated area shall be provided at the ratio of one space for every four mobilehome spaces."

Subsection 17.24.030(A)(6). "Rest homes, convalescent hospitals, residential care and similar group care facilities: one space for each four beds".

Within these provisions the Code includes references to numerous types of multi-occupant facilities. But, in none of these provisions is "dormitory" listed. As such, dormitories are an "Unlisted Use" and under subsection (H): "Unlisted Uses. The planning commission shall determine the parking requirements for uses not specifically listed. In determining such requirements, the planning commission shall use the above requirements as a general rule and guide."

At page 7 of the Staff Report, this issue was addressed: "The Municipal Code defines a 'lodging house' as a building, or portion thereof, other than a hotel, motel, or bed and breakfast inn, providing room and board or rooming only for compensation. Most often, this is understood as a house having furnished rooms for rent to lodgers. However, unlike a lodging house, the Vineyard Lodge site provides housing *and* transportation for a very specific type of tenant and has much more control over the activities of said tenants. The dormitory-use, established shuttle program, and provision of on-demand rental cars and bicycles, are such that the Vineyard Lodge Housing site operation would be distinctly different from that exhibited by a typical rooming/boarding or lodging house." And, obviously, the parking requirements at the dormitory are markedly different from the operation of hotel or motel where guests are here on a short-term basis touring the valley in their own vehicles the vast majority of the time.

We believe the clear language of Section 17.24.030 establishes that dormitories are not subjected to the same parking requirements as a motel, or a boarding/lodging house. This is not just an attempt to rely on a technicality – it's based on the requirement that there has to be a

nexus between the parking requirements and the use occurring on the property. In the Parking Memorandum from Crane Transportation standards are cited from the Institute of Traffic Engineers (ITE) Manual that parking requirements for colleges and universities are substantially lower than required by the Municipal Code for motels, hotels and/or lodging/boarding houses as addressed in the Staff Report. Given these distinguishing characteristics it is not reasonable, nor fair, to assume that the parking standards for rooming, boarding, or lodging houses is the appropriate standard to apply to this type of unlisted facility. Given that, we believe there is no basis for utilizing that standard to require the CIA to have to establish the requirements for a Variance. Instead, the Commission has the right, and we believe, obligation to impose a reasonable parking requirement for the Project which we have established is .31 spaces per room (which exceeds the one space for each four beds standard (.25) applicable to rest homes, convalescent hospitals and the like in subsection (6) because occupants of those facilities, like those at Vineyard Lodge, will not need regular access to their own vehicles).

We thank you for your continued patience regarding this matter.



**CITY OF ST. HELENA  
PLANNING DEPARTMENT 1480 MAIN STREET- ST. HELENA, CA 94574  
PLANNING COMMISSION**

**February 21, 2017**

**AGENDA ITEM:** #

**FILE NUMBER:** PL16-042

**SUBJECT:** *Culinary Institute of America (CIA) Campus Master Plan (Part 1 of 2)*  
Greystone Campus Design Review and Use Permit

**PREPARED BY:** Lilly Bianco, Contract Planner

**REVIEWED BY:** Noah Housh, Planning Director

**APPLICATION FILED:** 06.27.16      **ACCEPTED AS COMPLETE:** 10.05.16

**LOCATION OF PROPERTY:** 2555 Main Street

**APPLICANT:** Thomas Bensel, Managing Director of the Culinary Institute of America

**PHONE:** 1(707) 967-2310

**APN:** 009-131-003

**GENERAL PLAN:** Public; Quasi-Public;

**ZONING:** W:Winery; Planned Development; Historic Preservation Overlay

**PROPERTY DESCRIPTION:** The Greystone Campus at 2555 Main (APN. 009-131-003) is located on the west side of Main Street (SR 29) in northern St. Helena. The 14.7-acre site is situated at the western edge of the valley surrounded to the north, south, and west by oak woodlands and to the east, across Main Street/SR 29, by vineyards. Parcels to the south of the site support residential and agriculture (viticultural) uses. The site historically served agricultural uses as a cooperative winery. At present the site supports institutional and ancillary commercial uses associated with the Culinary Institute of America. The site is improved with four buildings and appurtenant parking (265 spaces). The four buildings include (1) the Rudd Center, a continuing education facility for the "Semester Away Wine program," (2) The Flavor Discovery Center, a Kitchen/demonstration space, (3) Guest House, which provides housing for 47 students (current occupancy is 45), and (4) the Greystone Cellars building which houses the balance of educational facilities and is the subject of the proposed project. Directly south of the property is the Carpy property which includes the Carpy house and is used for storage by the CIA.

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**PROJECT BACKGROUND**

In September of 1993, the City of St. Helena authorized the Culinary Institute of America (CIA) to operate at the Greystone Cellars site when the City Council certified the Final EIR prepared for the project and issued a Use Permit per Resolution No. 93-105. The use permit issued for the project authorized use of the Greystone Cellars property as an advanced cooking school with ancillary commercial uses; conditions stipulated that the student enrollment not exceed 104 students. Amendments to the use permit were authorized in 1996, 1997, 2001, 2003, 2004, 2006, 2007, and again in 2008. As amended, the use permit allows for the operation of a culinary school with ancillary commercial uses and a student enrollment of 200 students. The site is supported by a total of 265 parking spaces.

**HISTORY OF ACTIONS**

|                     |                                                                                                                                                                                                                   |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RESOLUTION 93-105   | Approved Use Permit for CIA @ Greystone                                                                                                                                                                           |
| RESOLUTION 96-95    | Amended conditions 10C, 10D, 10G and 12E to expand operation of the restaurant, expand operation of the campus store, frequency of tours, and address the design of the outdoor terrace.                          |
| RESOLUTION 97-162   | Authorized conversion of approx. 3,000 sf on third floor, south wing, to office uses.                                                                                                                             |
| RESOLUTION 2001-60  | Amended condition 10F, authorizing rehabilitation and use of Still House                                                                                                                                          |
| RESOLUTION 2003-42  | Amended condition 10F to authorize rehabilitation and use of Gatehouse                                                                                                                                            |
| RESOLUTION 2004-112 | Amended condition 13A to authorize increase in water use; concurrently amended water use agreement                                                                                                                |
| RESOLUTION 2006-07  | Amended conditions 10A, 10B, and 12F to allow for Associate's Degree; increase variety of classes; update provisions related to student/housing ratio                                                             |
| RESOLUTION 2008-76  | Amended conditions to update Regulated Food and Beverage Inventory; increase enrollment; allow more advertising; introduce new teaching kitchen; relocate existing teaching kitchen; and add 25-35 seat café/deli |

*For a comprehensive list of past entitlements issued to the Culinary Institute of America at Greystone see **ATTACHMENT 2**.*

**PROJECT DESCRIPTION**

The Culinary Institute of America (CIA) at Greystone is proposing a campus master plan to restructure and expand the educational facilities at the Greystone Campus (2555 Main Street) and expand student enrollment from 200 to 300 students. Also proposed is a 4,468 sf underground storage cave and the installation of three modular storage units at the rear of the building. The applicant is requesting Design Review and Use Permit entitlements for the Greystone site.

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Student Enrollment

The CIA proposes to increase student enrollment by 100 students to accommodate a total of 300 Students. The 300 students would be enrolled in an occupational education program to obtain an associate's degree (two year program) or certificate (one year program).

Storage Cave

The applicant proposes the excavation of a 4,468-square-foot (sf) storage cave at the north end of the Greystone Cellars building, beneath the former WSGR. The introduction of the storage cave would include constructing entry tunnels extending from two portals at the Greystone loading dock retaining wall. The portal openings would be 10 feet high and 10 feet wide.

Revision of Interior Spaces

The interior changes include improvements to the student dining commons, the introduction of new teaching kitchens, and a new special events kitchen. Also proposed is the closure of the 190 seat Wine Spectator at Greystone Restaurant (WSGR) and relocation of the CIA restaurant to the 58-seat Flavor Discovery Center, resulting in a net reduction in restaurant capacity of 132 seats. The restaurant at the Flavor Discovery Center will be student-run, and will serve meals five days a week for 36 weeks (180 days) per year as opposed to the WSGR which operated 362 days per year and served both lunch and dinner.

More specifically, the interior changes will be as follows:

- Convert the WSGR to a Student Commons and Dining Area and build a new Special Events Kitchen on second floor. The CIA would then demolish first floor workshops and existing back offices, consolidate Staff and faculty offices in an open floor plan administrative wing, and construct a student learning commons.
- Demolish the education office on the 3rd Floor and build a new baking and pastry facility. The CIA will then rebuild a teaching kitchen on the third floor along with two new skill development kitchens in the former bakeshop area.
- Finally, complete a new teaching kitchen, a garde manger kitchen, a multi-use kitchen, an ala carte kitchen, walk-in and storeroom, and specialty kitchen all on the third floor north.

Modular Units

A series of three (3) modular storage units ranging in size from 633 sf to 1,337 sf would be installed at the rear of the third floor of the Greystone Cellars building. The installation of the units would be conducted in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties so as to avoid impacting the building's historic integrity. The modular units will only be visible to students, staff and visitors who traverse the driveway at the rear of the property.

ANALYSIS

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**GENERAL PLAN**

The Greystone Campus exhibits a General Plan Land Use Designation of Public; Quasi-Public. The Public; Quasi-Public Designation occurs throughout the City and provides for government-owned facilities, public and private schools, and quasi-public uses

General Plan policies applicable to the Greystone Campus Master Plan include:

- 2.6.30 Protect historic resources in the commercial areas and encourage their rehabilitation and re-use
- 3.4.3 Give preference to visitor serving uses whose orientation is toward a more discriminating upscale market consistent with the Valley's reputation as a producer of world class wines, and discourage the introduction of uses that are dependent upon a mass tourist market, while not increasing the total number of tourists.
- 4.8.1 Preserve historic buildings and landscapes throughout the City of St. Helena as an important component of the City's heritage
- 4.8.2 Where feasible adapt historic structures to modern uses to ensure their economic viability and to protect against possible loss.

Staff Response:

As proposed the project will facilitate the continued use of the historic Greystone building and in doing so would preserve the historic resource as a valuable piece of St. Helena's heritage. As such, the project would be consistent with GP Policies, 2.6.30, 4.8.1, 4.8.2. Further, the Culinary Institutes' emphasis on food and wine education promotes the Valley's reputation of a world class destination for wine and the culinary arts. As such, the proposed project exhibits overall consistency with all applicable General Plan goals, policies, and objectives.

**ZONING**

Consistent with the Public; Quasi-Public Land Use Designation, the Greystone Campus exhibits a zoning designation of W: Winery; PD: Planned Development overlay and HP: Historic Preservation Overlay. The PD overlay may be combined with an existing zoning district insofar as the design and the proposed use is consistent with the intent of the St. Helena General Plan.

The PD overlay is intended to provide for development which serves public objectives more fully than development permitted under conventional zoning regulations. The PD overlay provides flexibility to allow for deviations from the standards of the zoning ordinance, accommodate mixed land uses, a variety of housing types, the assembly of small parcels of land into a larger more effective unit, the preservation of open space, natural features or historical structures and structures with diverse building setbacks, lot sizes and building heights.

The HP Overlay is applied to the site given that the site is historically significant and listed on the National Register of Historic Places (NRHP). The purpose of the HP overlay district is to preserve the unique architectural character of structures which have contributed to the city's historic development.

With the proposed changes, the project will continue to meet the applicable development criteria prescribed by the Zoning Code and will meet the intent of the Public; Quasi-Public Land use designation. Further, the project will comply with the HP overlay provisions given that it will not result in exterior changes to the building facades, structures, or to passage ways that could adversely impact the building's historic integrity. As stipulated under Municipal Code Section 17.92.050 no permits for remodeling shall be issued for properties within the HP district which would result in exterior changes to building facades, structures, or to passage ways providing inter-accessibility within a block, unless such change is approved by the planning commission in accordance with the following findings:

1. *That the alteration is compatible with the architectural style of the existing structures;*
2. *That the alteration does not eliminate elements that are required to maintain the essential form and character of the structure;*
3. *That the alternation is compatible with adjoining structures and the use of such structures.*

Given that the project does not propose any such changes, the project would not alter or otherwise impact the integrity of a significant historic resource and therefore complies with the HP District Regulations.

#### **WATER NEUTRALITY**

In August 2015 and pursuant to Ordinance 2015-5 the City of St. Helena established mandatory water efficiency measures for new construction, and adopted water demand offset requirements enumerated in Chapter 13.12.050 of the Municipal Code. Amongst these provisions is the requirement that any "new development" (i.e., construction that would introduce any freestanding building that contains water-using fixtures, any floor area additions to existing nonresidential structures, or any residential additions or remodeling that increases the number of independent living units) offset new demand by an amount of water equal to the new demand placed on the city water system using the methodology defined in Municipal Code section 13.12.050. The offset must be clearly demonstrated to the satisfaction of the Director of Public Works.

The CIA Campus currently operates under two separate water agreements. The current water allotments authorized by the Agreements allocate an average of 15,900 gpd to the Greystone Campus and 4,750 gpd to the Vineyard Lodge Housing site. The total allotment across the two sites amounts to an average of 20,650 gpd or 23.1 acre feet (AF) per year.

Under the CIA Campus Master Plan, the applicant proposes to maintain the existing gross water allotment of 23.1 AF per year, by combining the allocations set forth in the existing two agreements into a single agreement. Specifically, the applicant proposes the rescission of the two existing Agreements and the adoption of a new Joint Water Use Agreement which would redistribute the gross water allotment across the two sites (which will accommodate an increase in water use at the Vineyard Lodge site as the water usage at the Greystone Campus is reduced). The ability of the project to remain within the current gross allotment of 23.1 AF per year is made possible through the installation of new more efficient fixtures at the respective project sites. In any event, the applicant will remain obligated to use not more than 23.1 AF per year.

A condition of approval will require that the new water use agreement which will include adequate enforcement methods that are trackable and sufficiently enforceable so as to ensure that the authorized allotment is not exceeded. Under the proposed Joint Water Use Agreement required per the condition of approval the project will not generate a net increase in water use relative to what was originally approved. As such, the project complies with the City's water neutrality policy.

#### **DESIGN REVIEW**

The purpose of design review is to, amongst other things, promote the qualities that bring value to the community and foster attractiveness and functional utility of the community as a place to live and work. To approve design review, the Commission must find that the project is consistent with the design criteria prescribed by Section 17.164.030 and exhibits a quality of design that is compatible with adjacent development, features a siting, scale, massing and architectural style that is generally consistent with the predominant development patterns and that does not otherwise detract or negatively affect the established character of the surrounding neighborhood.

The Greystone Campus is historically significant as a good example of the late nineteenth century Richardsonian Romanesque architecture in California and further, because it provides a tangible link to the Napa Valley's historical viticultural operations of the last century. Recognizing the historic significance, all project activities are either confined to the interior of the subject site or less visible areas of the property. For example, the three proposed modular units will be confined to the rear of the building and located at the third floor and not readily visible from the property frontage. The storage cave will be underground with entrances confined to loading dock areas and at the rear of the subject property such that it is not visible from main viewing areas. Given the limited nature of exterior changes, the project is expected to be consistent with all Design Criteria parameters, as detailed below.

#### Design Criteria

1. Consistency and compatibility with applicable elements of the general plan;  
*As detailed above, the project is consistent with all applicable General Plan policies*
2. Compatibility of design with the immediate environment of the site;

*No exterior changes are proposed that would alter the design of the building or site.*

3. Relationship of the design to the site;

*The design will greatly limit changes visible on the building exterior; for example, the proposed modular units will be located at the building's rear and not readily visible from public viewing areas. As such, the relationship of the design to the site is appropriate.*

4. Determination that the design is compatible in areas considered by the board as having a unified design or historical character;

*All work will be performed in accordance with the Secretary of the Interior's Standards and will be consistent with the historic character of the subject site.*

5. Whether the design promotes harmonious transition in scale and character in areas between different designated land uses;

*No substantial changes are proposed that would alter the existing scale or character.*

6. Compatibility with future construction both on and off the site;

*No exterior changes are proposed that would alter compatibility with future construction on or off site.*

7. Whether the architectural design of structures and their materials and colors are appropriate to the function of the project;

*The proposed modular units will be of simple design and materials which will ensure their functionality while also limiting changes to the visual environment.*

8. Whether the planning and siting of the various functions and buildings on the site create an internal sense of order and provide a desirable environment for occupants, visitors and the general community;

*Not applicable.*

9. Whether the amount and arrangement of open space and landscaping are appropriate to the design and the function of the structures;

*No open space or landscaping is proposed as part of this project.*

10. Whether sufficient ancillary functions are provided to support the main functions of the project and whether they are compatible with the project's design concept;

*Not applicable.*

11. Whether access to the property and circulation systems are safe and convenient for pedestrians, cyclists and vehicles;

*No changes to the circulation system are proposed.*

12. Whether natural features are appropriately preserved and integrated with the project;

*No changes to natural features are proposed.*

13. Whether the materials, textures, colors and details of construction are an appropriate expression of its design concept and function and whether they are compatible with the adjacent and neighboring structure and functions;

*Three modular units ranging in size from 633 sf to 1,337 sf are proposed on the west elevation (rear) of the building. The units will be accessed from an existing roadway, supported on new horizontal steel structure that spans the area and similar to existing modern mechanical equipment supports. Utilitarian in nature, the units are constructed of painted metal siding, doors, and flat roofs behind shallow parapets. The proposed modular units are located away from principal elevations, have been designed to fit below the historic eave of the building, and are minimal in size compared to the original structure. Proposed work will use materials to differentiate the additions from the historic exterior masonry. These characteristics reflect the project's compliance with the Secretary of the Interior Standards for Rehabilitation (SOISR). Given the above, the proposed new modular units are expected to be compatible with adjacent structures.*

15. Whether the landscape design concept for the site, as shown by the relationship of plant masses, open space, scale, plant forms and foliage textures and colors create a desirable and functional environment and whether the landscape concept depicts an appropriate unity with the various buildings on the site;

*There is no new landscaping proposed.*

16. Whether plant material is suitable and adaptable to the site, capable of being properly maintained on the site, and is of a variety which is suitable to the climate of St. Helena;

*No landscaping is proposed.*

17. Whether sustainability and climate protection are promoted through the use of green building practices such as appropriate site/architectural design, use of green building materials, energy efficient systems and water efficient landscape materials.

*All outdated/inefficient fixtures and systems will be replaced with more efficient and environmentally friendly fixtures.*

*The exterior modifications proposed for the subject site are largely limited to the introduction of three new modular storage units at the rear of the property. The proposed units would be stand-alone not additions to the building such that they are reversible and their removal in the future would not affect the historic integrity of the building. Given the very limited design changes and in light of the design criteria above, the project is found to be generally consistent with the design review requirements.*

#### **USE PERMIT**

The purpose of a use permit is to allow the proper integration of essential or desirable uses which may be suitable only in certain locations or zoning districts in the City, or to ensure that such uses are designed or arranged on the site in a particular manner. In its review of applications for use permits, the Planning Commission shall evaluate each

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proposed use in order to consider its impact on the city. (Zoning Code Section 17.168 040).

The Greystone facility operates under use permit No. 93-105, which has been amended multiple times since approved in 1993. In its present form, the use permit authorizes the operation of a culinary school with a student population of 200 students, ancillary commercial uses, including a 35 seat café/bakery, the 190 seat Wine Spectator at Greystone Restaurant, and 3,100 sf retail store. The site is served by a total of 265 parking spaces with valet parking available for 60 vehicles.

The Applicant has requested to amend the use permit to better align with the facility's move toward occupational education and accommodate changing needs. Much of the CIA's large-scale special events and commercial activities have been transferred to the recently acquired, American Center for Wine Food & The Arts (COPIA) in the City of Napa. As such, the Greystone facility will see a much greater focus on the educational component. Specifically, the applicant is requesting that the use permit be revised to allow a total enrollment of 300 students, allow more flexibility in the operation of the retail store, and allow for a 58-seat student-run restaurant to replace the now closed, 190-seat Wine Spectator at Greystone Restaurant (**See Attachment 5**). The proposed changes do not substantially increase the intensity of the site or otherwise create an impact that would conflict with any of the requisite findings needed to approve a use permit.

The Greystone facility and uses therein have evolved significantly since the original use permit was issued in 1993. Accordingly, the recommended new use permit would incorporate and update items still applicable and add new conditions, as appropriate. As conditioned, the project will meet all applicable criteria, and Staff recommends approval of the new use permit.

The Findings required to approve a Use Permit are:

1. That the proposed use would not generate odors, fumes, dust, light, glare, radiation or refuse that would be injurious to surrounding uses or to the community.

*No significant changes in the operation of the facility will change and there is no expectation that the proposed project would generate odors, fumes, dust, light, glare, radiation or refuse beyond what is currently typical of the culinary school use. As such, operation of the Greystone Campus consistent with the proposed project would not be injurious to surrounding uses or the community.*

2. That the proposed use would not generate levels of noise that adversely affect the health, safety, or welfare of neighboring properties or uses.

*Levels of noise would be consistent with or less than existing noise levels given the reduction in events and size of the on-site restaurant.*

3. That the proposed use would not generate traffic noise in excess of the "normally acceptable" range identified in the General Plan.

*As detailed in the Traffic Impact Report, the proposed project will not cause a substantial increase in traffic trips that would cause the ambient noise level to exceed the normally acceptable range. Given the limited traffic trips associated with the proposed project, the project would not cause traffic noise to noticeably increase beyond existing level or otherwise exceed normally acceptable ranges.*

4. That the proposed use would not make excessive demands on the provision of public services including water supply, sewer capacity, energy supply, communication facilities, police protection, and fire protection.

*The level of demand placed on public services will remain consistent with that which currently exists due to the introduction of more efficient fixtures and systems, adherence to the water neutrality policy, and the fact that the proposed use will continue to operate as a culinary school with an ancillary retail and restaurant component.*

5. That the proposed use would provide adequate ingress and egress to and from the proposed location.

*No changes to ingress/ egress are proposed.*

6. That allowing the proposed use would not conflict with the City's goal of maintaining the economic viability of a local serving economy.

*The proposed use is consistent with that which currently exists at the site and no changes are expected that would otherwise conflict with the City's goal of maintaining the economic viability of a local serving economy.*

7. That the proposed use would be compatible with surrounding land uses and would not conflict with the purpose established for the district within which it would be located.

*No significant change in use or operation is proposed and as such, the proposed use would continue to be compatible with surrounding land uses.*

8. That the proposed use would not be in conflict with the City's General Plan.

*As detailed above, the use would be consistent with all applicable General Plan policies.*

9. That the proposed use would not be injurious to public health, safety, or welfare.

*The proposed use is largely consistent with that which currently exists at the subject site and is not expected to be injurious to public health, safety, or welfare.*

10. That granting the use permit would not set a precedent for the approval of similar uses whose incremental effect would be detrimental to the City or would be in conflict with the General Plan.

*The findings related to this particular project are unique and applicable only to the CIA Campus Master Plan. There is no reason to expect that approval of this use permit would set a precedent for the approval of similar uses whose incremental effect would be detrimental to the City or would be in conflict with the General Plan.*

11. That, as demonstrated on a detailed plan submitted by the applicant, adequate off-street parking to accommodate the long term parking needs of employees and business owners and customers is available.

*No changes to parking are proposed. Students living off-site would continue to be required to utilize the shuttle for transportation between student housing and the Greystone Campus. As such, no demand that couldn't be accommodated by the existing level of parking is expected.*

12. That the capacity of surrounding streets is adequate to serve the automobile and delivery truck traffic generated by the proposed use.

*The surrounding roadways will continue to be able to accommodate automobile and truck traffic generated by the proposed project and is not expected to increase substantially beyond that which currently exists.*

### **REGULATED FOOD & BEVERAGE ESTABLISHMENTS INVENTORY**

At present, the Regulated Food and Beverage Inventory lists 30 establishments. The project will result in the closure of the 190 seat Wine Spectator at Greystone Restaurant and introduction of the 58-seat restaurant at the Flavor Discovery Center, resulting in no net change in the number of establishments on site, but with a net reduction in seats of (132). The project will be conditioned such that restaurant seating not exceed 58 seats and that restaurant facilities remain an ancillary use to the overall educational use.

### **CEQA**

In accordance with Article 6 and Appendix G of the California Environmental Quality Act (CEQA) Guidelines, an Initial Study and Mitigated Negative Declaration (IS/MND) has been prepared for the proposed project and included as **Attachment 7**. The document contains a description of the proposed project, an analysis of potential environmental impacts resulting from the proposed project, as well as mitigation measures intended to reduce potentially significant impacts to less-than-significant levels.

The IS/MND found that although the proposed project would generate potentially significant impacts related to aesthetics, air quality, biological resources, cultural resources, geology and soils, land use, noise, and transportation, through the

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introduction of mitigation measures agreed upon by the project applicant, all potentially significant impacts would be reduced to less than significant levels.

The Draft IS/MND was circulated for a 40-day public review period from December 9, 2016 to January 23, 2017. Twelve (12) comment letters were received during the public comment period which communicated concerns related to wastewater generation, water availability, traffic, aesthetics, and safety. A formal response to comments was prepared and is included as **Attachment 8**.

The Response to Comments addresses concerns raised on environmental issues and provide clarification and revision to the IS/MND, as appropriate. Included in Section 3 of the Response to Comments are changes made to the IS/MND. Modifications are denoted using strikethrough for deletions and underline for insertions. Modifications to the IS/MND are intended to provide clarification, expand discussion, and enhance understanding of the analysis, site conditions, and potential impacts of the project. No modifications to the IS/MND were so substantial as to warrant recirculation pursuant to CEQA Guidelines Section 15088.5

### **PUBLIC COMMENT/ ISSUES**

At the writing of the staff report a total of 18 comment letters were received on the project, 12 of those letters were provided during the public comment period and responded to as part of the CEQA Response to Comments. Issues raised centered on the Vineyard Lodge component and related to concerns about wastewater generation, water availability, traffic, aesthetics, and safety. A detailed discussion of these issues is provided in the Response to Comments, **Attachment 8**.

### **STAFF RECOMMENDATION**

The Planning and Community Improvement Department recommends that the Planning Commission:

1. Adopt the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program for the project; and
2. Accept the required findings enumerated in Municipal Code Section 17.164.030 and adopt a resolution approving Design Review and a Use Permit for the CIA at Greystone project.

### **ATTACHMENTS**

- 1.Resolution + Conditions
- 2.Legislative History
- 3.APN Map
- 4.Aerial View
- 5.Project Narrative
- 6.Project Plans date stamped, Feb 13, 2017
- 7.Mitigated Negative Declaration and MMRP, Dec 9, 2016.
- 8.Response to Comments on the IS/MND
- 9.Public Comments

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**CITY OF ST. HELENA PLANNING COMMISSION**

**RESOLUTION PC20xx-xx**

**RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF ST. HELENA  
ADOPTING A MITIGATED NEGATIVE DECLARATION AND MITIGATION  
MONITORING AND REPORTING PROGRAM FOR THE CULINARY INSITUTE OF  
AMERICA CAMPUS MASTER PLAN AND GRANTING APPROVAL OF DESIGN  
REVIEW AND A USE PERMIT FOR 2555 MAIN STREET AND GRANTING APPROVAL  
OF A DEMOLITION PERMIT, DESIGN REVIEW, USE PERMIT, AND VARIANCES FOR  
830 PRATT AVENUE IN THE CITY OF ST.HELENA, CALIFORNIA**

**PROPERTY OWNER:** CULINARY INSTITUTE OF AMERICA

**APN:** 009-010-024  
and 009-131-003

**Recitals**

1. **Whereas**, The Culinary Institute of America submitted an application for Design Review and Use Permit approval to expand student enrollment to 300 students, introduce storage cave, and three modular storage units at the Greystone Campus at 2555 Main Street (APN.009-131-003); and
2. **Whereas**, The Culinary Institute of America also submitted an application for a Demolition Permit, Design Review, Use Permit, and Variances to expand the student housing at the Vineyard Lodge Housing Site at 830 Pratt Avenue (APN. 009-010-024); and
3. **Whereas**, Pursuant to CEQA Guidelines Sections 15072 and 15073, a Draft Mitigated Negative Declaration and included Initial Study was circulated for public review and comment from December 9, 2016 until January 23, 2017; and
4. **Whereas**, the Initial Study/Mitigated Negative Declaration concluded that implementation of the Project could result in a number of potentially significant effects on the environment and identified mitigation measures that would reduce the significant effects to a less-than-significant level; and
5. **Whereas**, in connection with the approval of a project involving the preparation of an initial study/mitigated negative declaration that identifies one or more significant environmental effects, CEQA requires the decision-making body of the lead agency to incorporate feasible mitigation measures that would reduce those significant environmental effects to a less-than-significant level; and.
6. **Whereas**, whenever a lead agency approves a project requiring the implementation of measures to mitigate or avoid significant effects on the environment, CEQA also

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requires a lead agency to adopt a Mitigation Monitoring and Reporting Program to ensure compliance with the mitigation measures during project implementation; and

7. **Whereas**, The Planning Commission of the City of St. Helena, State of California, considered the project, staff report, and all testimony, written and spoken, at a duly noticed public hearing on February 21, 2017.
8. **Whereas**, A public notice was published in the St. Helena Star and mailed to residents and occupants within 500 feet of the project site and in compliance with state and local law; and
9. **Now, therefore** let it be found that, the Planning Commission adopts the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program, and approves the requested Use permit and Design Review for 2555 Main Street and approves the Demolition Permit, Design Review, Use Permit, and Variances for 830 Pratt Avenue on the following basis:

#### **Resolution**

1. In making the findings in this Resolution, the Planning Commission relied upon and hereby incorporates by reference all of the documents referenced in this Resolution and the associated staff report, City files for this matter, correspondence, presentations and other materials.
2. **CEQA Findings**
  1. The Planning Commission has independently reviewed and analyzed the Initial Study/Mitigated Negative Declaration and other information in the record and has considered the information contained therein, prior to acting upon or approving the Project,
  2. The Initial Study/Mitigated Negative Declaration prepared for the Project has been completed in compliance with CEQA and consistent with state and local guidelines implementing CEQA,
  3. On the basis of the whole record, there is no substantial evidence that the Project as designed, conditioned, and mitigated, will have a significant effect on the environment.
  4. The Initial Study/Mitigated Negative Declaration represents the independent judgment and analysis of the City as lead agency for the Project.
3. **2555 Main Street Findings and Conditions of Approval**
  - A. **DESIGN REVIEW.** The Planning Commission finds that The Greystone Campus is historically significant as a good example of the late nineteenth century Richardsonian Romanesque architecture in California and provides a tangible link to the Napa Valley's historical viticultural operations of the last century. All project activities are either confined to the interior of buildings or less visible areas of the property such that any changes are not readily visible from main viewing areas. The exterior modifications proposed for the subject include the introduction of three new modular storage units at the rear of the property. The introduction of the proposed modular units would be reversible and their removal in the future would not affect

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the historic integrity of the building. Given the very limited design changes and for the reasons described below, the project is found to be generally consistent with the design review requirements. As such, the Planning Commission determines the project is in compliance with the following Design Review criteria of Municipal Code Section 17.164.030:

1. Consistency and compatibility with applicable elements of the general plan;  
*As proposed the project will facilitate the continued use of the historic Greystone building and in doing so would preserve the historic resource as a valuable piece of St. Helena's heritage. As such, the project would be consistent with GP Policies, 2.6.30, 4.8.1, 4.8.2. Further, the Culinary Institutes' emphasis on food and wine education promotes the Valley's reputation of a world class destination for wine and the culinary arts. As such, the proposed project exhibits overall consistency with all applicable General Plan goals, policies, and objectives.*
2. Compatibility of design with the immediate environment of the site;  
*No exterior changes are proposed that would alter the design of the building or site.*
3. Relationship of the design to the site;  
*The design will greatly limit changes visible on the building exterior; for example, the proposed modular units will be located at the building's rear and not readily visible from public viewing areas. As such, the relationship of the design to the site is appropriate.*
4. Determination that the design is compatible in areas considered by the board as having a unified design or historical character;  
*All work will be performed in accordance with the Secretary of the Interior's Standards and will be consistent with the historic character of the subject site.*
5. Whether the design promotes harmonious transition in scale and character in areas between different designated land uses;  
*No substantial changes are proposed that would alter the existing scale or character.*
6. Compatibility with future construction both on and off the site;  
*No exterior changes are proposed that would alter compatibility with future construction on or off site.*
7. Whether the architectural design of structures and their materials and colors are appropriate to the function of the project;  
*The proposed modular units will be of simple design and materials which will ensure their functionality while also limiting changes to the visual environment.*
8. Whether the planning and siting of the various functions and buildings on the site create an internal sense of order and provide a desirable environment for occupants, visitors and the general community;

*The majority of changes are confined to the interior of the existing Greystone building and therefore would not alter the existing site configuration or overall functionality of the site. The proposed modular units and storage cave would be located conveniently with connectivity to the internal uses they serve. As such, proposed changes would be functional and would limit changes to the visual environment of the site.*

9. Whether the amount and arrangement of open space and landscaping are appropriate to the design and the function of the structures;

*No open space or landscaping is proposed as part of this project.*

10. Whether sufficient ancillary functions are provided to support the main functions of the project and whether they are compatible with the project's design concept;

*The project includes modular storage units and storage cave that will support the Culinary school use of the site. The ancillary components are either shielded from view, in the case of the modular units, or underground and not visible, in the case of the storage cave. Given the limited visibility of both components, they are expected to be compatible with the overall design of the Greystone property.*

11. Whether access to the property and circulation systems are safe and convenient for pedestrians, cyclists and vehicles;

*No changes to the circulation system are proposed.*

12. Whether natural features are appropriately preserved and integrated with the project;

*No changes to natural features are proposed.*

13. Whether the materials, textures, colors and details of construction are an appropriate expression of its design concept and function and whether they are compatible with the adjacent and neighboring structure and functions;

*Three modular units ranging in size from 633 sf to 1,337 sf are proposed on the west elevation (rear) of the building. The units will be accessed from an existing roadway, supported on new horizontal steel structure that spans the area and similar to existing modern mechanical equipment supports. Utilitarian in nature, the units are constructed of painted metal siding, doors, and flat roofs behind shallow parapets. The proposed modular units are located away from principal elevations, have been designed to fit below the historic eave of the building, and are minimal in size compared to the original structure. Proposed work will use materials to differentiate the additions from the historic exterior masonry. These characteristics reflect the project's compliance with the Secretary of the Interior Standards for Rehabilitation (SOISR). Given the above, the proposed new modular units are expected to be compatible with adjacent structures and functions.*

15. Whether the landscape design concept for the site, as shown by the relationship of plant masses, open space, scale, plant forms and foliage textures and colors create a desirable and functional environment and whether the landscape concept depicts an appropriate unity with the various buildings on the site;



*There is no new landscaping proposed.*

16. Whether plant material is suitable and adaptable to the site, capable of being properly maintained on the site, and is of a variety which is suitable to the climate of St. Helena;

*No landscaping is proposed.*

17. Whether sustainability and climate protection are promoted through the use of green building practices such as appropriate site/architectural design, use of green building materials, energy efficient systems and water efficient landscape materials.

*All outdated/inefficient fixtures and systems will be replaced with more efficient and environmentally friendly fixtures and as such, the project will further sustainability goals.*

- B. USE PERMIT. Pursuant to Municipal Code Section 17.168.050, the Planning Commission acknowledges that the Culinary Institute of America at Greystone endeavors to place a greater focus on occupational education. To achieve this, the applicant requests that the use permit authorize a total enrollment of 300 students, allow more flexibility in the operation of the retail store, and allow for a 58 seat student-run restaurant to replace the now closed, 190-seat Wine Spectator at Greystone Restaurant. It is determined that proposed changes do not substantially increase the intensity of the site or otherwise create an impact that would conflict with any of the requisite findings needed to approve a use permit. Accordingly, the Planning Commission makes the following Use Permit findings to support the motion to approve the use permit:

1. That the proposed use would not generate odors, fumes, dust, light, glare, radiation or refuse that would be injurious to surrounding uses or to the community.

*No significant changes in the operation of the facility will change and there is no expectation that the proposed project would generate odors, fumes, dust, light, glare, radiation or refuse beyond what is currently typical of the culinary school use. As such, operation of the Greystone Campus consistent with the proposed project would not be injurious to surrounding uses or the community.*

2. That the proposed use would not generate levels of noise that adversely affect the health, safety, or welfare of neighboring properties or uses.

*Levels of noise would be consistent with or less than existing noise levels given the reduction in events and size of the on-site restaurant.*

3. That the proposed use would not generate traffic noise in excess of the "normally acceptable" range identified in the General Plan.

*As detailed in the Traffic Impact Report, the proposed project will not cause a substantial increase in traffic trips that would cause the ambient noise level to*

*exceed the normally acceptable range. Given the limited traffic trips associated with the proposed project, the project would not cause traffic noise to noticeably increase beyond existing level or otherwise exceed normally acceptable ranges.*

4. That the proposed use would not make excessive demands on the provision of public services including water supply, sewer capacity, energy supply, communication facilities, police protection, and fire protection.

*The level of demand placed on public services will remain consistent with that which currently exists due to the introduction of more efficient fixtures and systems, adherence to the water neutrality policy, and the fact that the proposed use will continue to operate in a manner consistent with what currently exists, as a culinary school with an ancillary retail and restaurant component.*

5. That the proposed use would provide adequate ingress and egress to and from the proposed location.

*No changes to ingress/ egress are proposed.*

6. That allowing the proposed use would not conflict with the City's goal of maintaining the economic viability of a local serving economy.

*The proposed use is consistent with that which currently exists at the site and no changes are expected that would otherwise conflict with the City's goal of maintaining the economic viability of a local serving economy.*

7. That the proposed use would be compatible with surrounding land uses and would not conflict with the purpose established for the district within which it would be located.

*No significant change in use or operation is proposed and as such, the proposed use would continue to be compatible with surrounding land uses.*

8. That the proposed use would not be in conflict with the City's General Plan.

*As detailed above, the use would be consistent with all applicable General Plan policies.*

9. That the proposed use would not be injurious to public health, safety, or welfare.

*The proposed use is largely consistent with that which currently exists at the subject site and is not expected to be injurious to public health, safety, or welfare.*

10. That granting the use permit would not set a precedent for the approval of similar uses whose incremental effect would be detrimental to the City or would be in conflict with the General Plan.

*The findings related to this particular project are unique and applicable only to the CIA Campus Master Plan. There is no reason to expect that approval of this use permit would set a precedent for the approval of similar uses whose incremental effect would be detrimental to the City or would be in conflict with the General Plan.*

11. That, as demonstrated on a detailed plan submitted by the applicant, adequate off-street parking to accommodate the long term parking needs of employees and business owners and customers is available.

*No changes to parking are proposed. Students living off-site would continue to be required to utilize the shuttle for transportation between student housing and the Greystone Campus. As such, no demand that couldn't be accommodated by the existing level of parking is expected.*

12. That the capacity of surrounding streets is adequate to serve the automobile and delivery truck traffic generated by the proposed use.

*The surrounding roadways will continue to be able to accommodate automobile and truck traffic generated by the proposed project and is not expected to increase substantially beyond that which currently exists.*

- C. The Planning Commission approves the design review and use permit for the above-described project with the following conditions of approval. The project shall be in conformance with all city ordinances, rules, regulations and policies in effect at the time of issuance of a building permit. The conditions noted below are particularly pertinent to this permit and shall not be construed to permit violation of other laws and policies not so listed.

#### **Conditions of Approval**

1. Project approvals shall be vested within one (1) year from the date of final action. A building permit for the use allowed under this approval shall have been obtained within one (1) year from the effective date of this action or the approval shall expire, provided however that the approval may be extended for up to two (2) one-year periods pursuant to the St. Helena Municipal Code, Section 17.08.130, Extension of Permits and Approvals. Any request for an extension of this approval shall be justified in writing and received by the Planning Department at least thirty (30) days prior to expiration.

2. The approvals shall not become effective until fourteen (14) calendar days after approval, providing that the action is not appealed by the City Council or any other interested party within that 14-day period.
3. All required fees, including planning fees, development impact fees, residential in-lieu housing fees, building fees, toilet retrofit fees, and St. Helena Unified School District fees shall be paid prior to issuance of a building permit. Fees shall be those in effect at the time of the issuance of the building permit.
4. Upon approval of Resolution XX-XX, the Applicant shall provide the Planning Department with the Notice of Determination Fee required by Fish and Wildlife Code Section 711.4(d). The fee payment shall be made by check payable to the Napa County Clerk and in the amount required and published by the Napa County Clerk for such fee.
5. All Mitigation Measures enumerated in the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program are incorporated by reference and made conditions of approval.
6. Prior to issuance of any construction permits, these conditions of approval *and* the Mitigation and Monitoring and Reporting Program shall be included with the plan set. A copy of the approved plans shall be maintained on site when construction activities are underway.
7. Pursuant to St. Helena Municipal Code Section 17.08.110, this permit shall run with the land and shall be binding upon all parties having any right, title or interest in the real property or any part thereof, their heirs, successors and assigns, and shall inure to their benefit and benefit of the City of St. Helena.
8. The primary purpose of this review is for compliance with the General Plan and Zoning Ordinance. The property owners or their designee shall be responsible for meeting with the Building Official, Fire Inspector and or Public Works Department to review compliance with Building Codes, Fire Codes and specific Public Works Standards including fire protection systems and any applicable accessibility standards of Title 24.
9. Construction shall be in compliance with plans submitted and reviewed by the Planning Commission on February 21, 2017, except as modified herein.
10. Minor modifications to approved plans may be approved by the Planning Director insofar as they are in substantial conformance with this approval.
11. The site shall be kept clear at all times of garbage and debris. No outdoor storage is permitted.
12. A final lighting plan delineating building mounted lights shall be reviewed and approved by the Planning and Community Improvement Director prior to building permit issuance.
13. Trash bins shall not be visible from public right-of-way.
14. All plantings shall be maintained in good growing condition. Such maintenance shall include, where appropriate, pruning, mowing, weeding, and cleaning of debris and

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trash, fertilizing and regular watering. Where necessary, plantings shall be replaced with other plant materials to insure continued compliance with applicable landscaping requirements, Irrigation systems shall be maintained in sound operating condition with heads periodically cleaned and replaced when missing to ensure efficient watering and to maintain good health and vitality of landscape materials.

15. No signage is approved by this permit. A separate sign permit in compliance with the Municipal Code shall be obtained prior to installation of signage.
16. Property owners shall recognize that there exists a right to farm properties within the district and in the vicinity of the district. There is a good faith expectation that no complaints will occur regarding legal, normal agricultural activities on properties in the district or in the vicinity of the district. Such activities may include day or night disbursement of chemicals, and creation of dust, noise, or fumes.
17. In any action or proceeding to attack, challenge, invalidate, set aside, void or annul the City's approval of applicant's Project, in whole or in part, applicant shall defend, at its own expense and without any cost to the City, and with counsel acceptable to the City, and shall fully and completely indemnify and hold the City, its agents, officers, and employees harmless from and against any and all claims, causes of action, damages, costs, attorney's fees and liability of any kind, so long as the City reasonably promptly notifies the applicant of any such claim, action, or proceedings and the City cooperates fully in the defense of the action or proceedings.

#### **Planning Department Conditions**

18. As applicable, the permittee shall comply with any and all previous conditions of approval for the CIA Greystone Campus except as they may be explicitly modified by this action. To the extent there is a conflict between previous conditions of approval enumerated in any previous resolutions relating to the subject site including, but not necessarily limited to: Resolution Nos. 93-105; 96-95; 97-162; 2001-60; 2003-42; 2004-112; 2006-07; 2006-130; or 2008-76 and these conditions of approval, these conditions shall control, superseding the prior approvals with respect to any such conflict.
19. The primary use shall be that of an advanced cooking school with ancillary uses limited to (1) 58 seat student run restaurant, (1) 35 seat bakery/café and, (1) 3,100 square foot retail store subject to the conditions herein.
20. The student population shall not exceed 300 students. Students shall be limited to those enrolled an Associate, Bachelor's, Master's and/or other Certificate Degree Program.
21. Only students actively enrolled at the CIA at Greystone campus shall be allowed to use school lodging accommodations. The student's length of stay shall be commensurate with the respective degree program.

22. As an ancillary component to the bakery and pastry education program and to help students satisfy educational requirements, a Bakery/Café with no more than 35 seats may be operated within the Greystone Cellars building.
23. A restaurant may be operated within the Flavor Discovery Center (FDC) as an accessory use to the school with seating limited to a total of 58 seats, including both indoor and outdoor dining. Any outdoor dining shall be consistent with the Zoning Regulations in effect at the time of operation.
24. A 3,100 sf campus store may be operated as an accessory use to the school within the main winery building. The store shall be limited to the hours of operation of 10:00 a.m. – 7:00 p.m. Items sold at the retail store shall be directly related to the food and beverage industry or to the incidental needs of the student residents, such as toiletries and stationery. Bottled wine sales may be permitted. The store may be advertised in educational, food service, trade and Napa county newspapers of record. Site signage shall comply with the St. Helena sign ordinance. Wine tasting may occur within the store as an accessory and subordinate activity relating to the sale of wine but shall occur only during the hours the retail store is open."
25. Valet parking shall be provided for all special and community events if they are held during hours that the restaurant is open and/or when designated on-site parking is not adequate. No parking shall be permitted along Highway 29/Main Street or Deer Park Road.
26. The CIA may offer tours and limited educational experiences to the General Public so long as such activities are incidental and secondary to the primary degree and/or Certificate educational programs offered at Greystone.
27. The Applicant shall provide a Transportation Plan that describes the operation of (1) the shuttle service (2) the rental car service (3) parking permits for individual vehicles and (4) the specifics of the on-demand bike program as they relate to the Greystone Campus and Vineyard Lodge Housing Site. The Plan shall be subject to review and approval by the Planning and Community Improvement Director. A copy of the approved Transportation Plan shall be provided and kept in the hard copy and digital project file.
28. Modular Units and the underground cave shall be used for storage of products and wares used for the purposes of culinary education.
29. Prior to issuance of building permit, the applicant shall execute a Joint Water Use Agreement with the Vineyard Lodge Housing Site. The Joint Agreement shall authorize a maximum water allocation of 23.1 acre feet/year to be utilized by the two sites. The Joint Agreement shall include enforcement provisions and penalties if the allowance is exceeded in a given year.

30. Any significant change(s) to the operation of the approved use, including a change in hours of operation, intensity, or type(s) of uses shall require amendment to this use permit.

#### **Public Works Conditions**

31. Approval of this project shall be subject to the requirements of, and all improvements shall be designed and constructed in accordance with, the most current version at the time of improvement plan submittal, Caltrans Standards and Specifications, the City of St. Helena Municipal Code, the St. Helena Water and Sewer Standards, the St. Helena Street, Storm Drain and Sidewalk Standards, and all current federal, state and county codes governing such improvements.
32. For any improvements outside the existing building envelope, a grading and drainage plan showing topographic data, all easements, infrastructure onsite and directly adjoining, and an erosion control plan shall be submitted for review and approval by the City Engineer prior to the issuance of a building permit. If the project entails more than 50 cubic yards of soil disturbance, 10,000 square feet of disturbance area, a cut or fill of 3 feet or more, or alteration of any drainage pattern, a grading permit shall be required.
33. A detailed Soils Investigation/Geotechnical Report shall be prepared and submitted for review. The report shall address, at a minimum, potential for liquefaction, R-values, expansive soils, seismic risk, cave wall and ceiling stability, etc. The improvement plans shall incorporate all design and construction criteria recommended in the Geotechnical Report.
34. Remodels or new construction which requires fire sprinklers shall install an appropriately-sized water service with appropriate backflow and meter devices prior to Certificate of Occupancy. Fire system calculations shall be submitted with the Grading and Drainage Plan to verify fire service lateral and meter sizing. Deferred submittals are not accepted.
35. The applicant shall be required to submit to the requirements for annual inspections of food/beverage service establishments and businesses that handle hazardous wastes for illicit stormwater discharges as required by the State National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges. The annual stormwater illicit discharge inspections are performed and invoiced by Napa County Department of Environmental Management.
36. Trash areas, dumpsters and recycling containers shall be enclosed and roofed per State and County standards to prevent water run-on to the trash area and water runoff from the area, to contain litter and trash so that it is not dispersed by the wind or run-off during waste removal. In the event that wine or food is disposed in these areas, they shall drain to the sanitary sewer system. An area drain connected to the sanitary sewer shall be installed in the enclosure area and a structural control such as an oil/water separator or sand filter shall be included. No other area shall drain

into the trash enclosure. A sign shall be posted prohibiting the dumping of hazardous materials into the sanitary sewer.

37. The applicant shall incorporate water conservation practices into the proposed project per the Water Neutrality Calculations prepared by Summit Engineering, dated October 15, 2016. Any and all non-conforming appliances and plumbing fixtures shall be removed from the premises. The water conservation requirements shall be replicated in full on the architectural plans.
38. Erosion and sediment control plans shall conform to the latest State and City codes at a minimum.
39. Grading plans shall identify off-haul routes and soil disposal sites, subject to review and approval by Public Works. All grading and spoils generated by construction of the project facilities, including cave spoils, shall be removed and/or permanently placed prior to final occupancy.
40. The Applicant shall keep adjoining public streets free and clean of project dirt, mud, materials, and debris during the construction period, as is found necessary by the City Engineer.
41. Any new and modified existing water laterals, meters and backflow prevention devices shall be required and constructed in accordance with the requirements of the City of St. Helena's Water Standards.
42. The applicant shall repair all public improvements that are damaged by the construction process in accordance with the City Water/Sewer/Street/Storm Drain/Sidewalk Standards prior to Certificate of Occupancy.
43. Existing streets being cut by new utility services will require edge grinding and an A.C. overlay per City standards, extent to be determined by the Public Works Department.
44. The applicant shall be required to obtain an encroachment permit for improvements on public right-of-ways prior to receiving a grading or building permit authorizing site work or construction activities on the site.

#### **Building Department Conditions**

45. A building permit is required for all onsite demolition, construction and/or change of occupancy.
46. The applicant will be required to comply with the codes adopted at the time the applicant applies for a building permit. At this time the City of St. Helena utilizes the 2013 Title 24 codes.



47. When submitting plans for a building permit, the plans shall include all documentation listed on the building permit application checklist.
48. The applicant shall provide a construction waste management plan with the building permit application.
49. The plans for construction shall include a checklist for compliance with the California Green Buildings Standards Code, mandatory measures. Provide a reference on the checklist indicating where the mandatory measures can be found on the plans.
50. When submitting plans, the title page shall include all information referenced on the building permit application checklist Title Page requirements.
51. Building Permit application materials and plans shall include any documentation pertaining to special loads applicable to the design and the specified section of the code that addresses the condition; special inspections for any systems or components requiring special inspection; requirements for seismic resistance; and a complete list of deferred submittals at time of application. Any deferral of the required submittal items shall have prior approval of the Building Official however deferral of fire sprinkler design is not allowed.

#### **Fire Department Conditions**

58. Fire sprinklers and fire hydrants shall be installed as required by the Fire Department

#### **4. 830 Pratt Avenue Findings and Conditions of Approval**

- A. DEMOLITION. Pursuant to Municipal Code Section 17.164.050(E), the Planning Commission finds that the Vineyard Lodge 1 (c.1960) is not eligible for listing on the California Register of Historic Resources (CRHR) and because the building is not particularly cohesive with the surrounding agricultural and residential character makes the following findings for the approval of a Demolition Permit:

1. That, based on the public record and testimony presented at a public hearing, the building is determined not to be a significant architectural or historical building.

*The applicant is requesting a permit to demolish the former Marlinda Convalescent Home and what is today known as "Vineyard Lodge 1". The building was constructed c.1960. Following review of available records, consultants, Architectural Resources Group, determined that the subject building proposed for demolition does not meet the Criteria for listing on the California Register of Historic Resources (CRHR) given that it does not exhibit architectural significance, is not associated with any significant themes or persons and is not expected to yield any information important to expand our understanding of history or prehistory. Staff concurs with this determination.*

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2. That the demolition does not eliminate elements that are required to maintain the essential character of the neighborhood.

*As a 1960s era convalescent home located in an otherwise agriculture and residential area, the building was not found to be particularly cohesive with the existing environment. Given this, it's demolition is not expected to adversely impact the essential character of the neighborhood. Accordingly, Staff finds that the demolition of the proposed building will not negatively impact a historic resource or existing visual environment.*

- B. DESIGN REVIEW. The Planning Commission determines the project's natural color palette, stepped design, retention of existing trees adjacent to the public right-of-way and the addition of new trees will be compatible with the surrounding character along Pratt Avenue and limit visual impacts such that it would be in compliance with the following Design Review criteria enumerated in Municipal Code Section 17.164.030, and as follows:

1. Consistency and compatibility with applicable elements of the general plan;

*As stated above, the subject project is consistent with General Plan policies 4.3.4, 2.6.2, 2.6.4, 2.6.5 and HE 1.5, 2.1, 2.2, and 2.6 in that the project would consist of infill on an already developed site, would occur in a logical and orderly manner proximate to urban services, and would be of a size and design that is consistent with existing site development. Further, the site would not encroach into or otherwise hinder agricultural activities in the vicinity of the subject site. As a previously developed site within approximately one mile of the Greystone Campus, the project location at 830 Pratt is well suited to accommodate student housing at a higher density and provide a creative solution to the need for affordable student housing. As such, the project is determined to exhibit overall consistency with the intent of the General Plan and Housing Element.*

2. Compatibility of design with the immediate environment of the site;

*The project site is situated at the northern border of St Helena's urban limits where medium density housing development is bordered by agricultural land uses immediately to the north and east. Adjacent development includes the Beringer Winery warehouse building and wastewater treatment facilities. Therefore, the visual character of the project area is comprised of both residential scale single-family residences (south and west) and agricultural uses including processing and storage (north, east, and west) building and facilities.*

*The subject site is currently developed with two dormitory buildings ranging from one to two stories in height. The one-story building will be demolished and the two story building is to be retained. The expansion of the Vineyard Lodge House is generally consistent with what is presently on the site and would not substantially alter the existing relationship of the site to its surroundings or otherwise make the site incompatible with the surroundings. The new construction would be clustered on the site and exhibit defined boundaries and*

*generous vegetative screening. As such, compatibility of the site with its surroundings is found to be maintained.*

3. Relationship of the design to the site;

*As stated above, the site configuration will include a series of four buildings (3 new) clustered around a central courtyard and traversed by a one-way access road. Those buildings with frontage on Pratt Avenue will feature a stepped design and a minimum setback of 20 feet from Pratt Avenue so as to limit visual prominence and provide continuity with other properties proximate to the site, which are developed with similar setbacks. Therefore, given the site constraints, the relationship of the design to the site appears to strike an appropriate balance between function and aesthetics.*

4. Determination that the design is compatible in areas considered by the board as having a unified design or historical character;

*The segments of Pratt Avenue proximate to the subject site do not exhibit a unified or historical character. The surrounding area features residential uses, industrial/agricultural production uses, and vineyards. The proposed design is generally consistent with Vineyard Lodge II and the existing character of the site and would not depart significantly from that existing character. The project is therefore not expected to impact an area having a unified or historical character.*

5. Whether the design promotes harmonious transition in scale and character in areas between different designated land uses;

*The subject buildings with frontage on Pratt Avenue will be stepped in height such that the buildings along Pratt will be two stories in front (with max height of 29'2") with taller (3-story) portions confined to the rear of the site (max height of 40'2"). Similarly, the buildings will feature a minimum 20' setback from the Pratt Avenue Property line (50' from Pratt Centerline) in an effort to reduce the perceived massing and scale and promote a harmonious transition in scale relative to residential buildings proximate to the site and in relation to the agricultural production facilities nearby. Further, this site serves as a transition from the adjacent agricultural production and warehouse use on the Beringer property to the single family and vineyard uses further down Pratt Avenue.*

6. Compatibility with future construction both on and off the site;

*The project design is contemporary in style, but with traditional detailing. The buildings feature a neutral color palette. The proposed design would not introduce an element that was so unique or exceptional as to make it incompatible with future development on and/or off site.*

7. Whether the architectural design of structures and their materials and colors are appropriate to the function of the project;

*The proposed buildings will be contemporary in style, but feature some craftsman-like details including wood columns and brackets. The building will be supported by an exposed, parge coated foundation. Exterior walls would be clad in a combination of painted clapboard siding and stained red cedar siding and*

*punctuated with clad windows. The buildings would feature articulated roof-lines with asphalt shingles. The proposed color palette includes neutral hues like brown, natural wood, and moss green. The proposed color and materials reflect traditional materials and colors that would help the buildings to more readily blend in with their surroundings. The architectural design, material, and colors are responsive to the needs of the site and appropriate to the function of the project and generally compatible with adjacent buildings and uses.*

8. Whether the planning and siting of the various functions and buildings on the site create an internal sense of order and provide a desirable environment for occupants, visitors and the general community;

*The proposed site configuration would feature three buildings clustered around a central courtyard. The site would be traversed by a one-way access road with parking clustered around the outer portions of the site, screened with significant amounts of vegetation. As such, the site configuration is expected to provide for a desirable environment that is both functional and aesthetically pleasing to residents and the general community.*

9. Whether the amount and arrangement of open space and landscaping are appropriate to the design and the function of the structures;

*The project proposes a generous level of landscaping and will retain a number of trees at the property frontage to promote screening. The level of landscaping will soften the look of the new buildings and appears to be appropriate for the use and to promote continuity with surrounding properties.*

10. Whether sufficient ancillary functions are provided to support the main functions of the project and whether they are compatible with the project's design concept;

*The project will include interior students commons and dining area as well as an outdoor courtyard and amenity area. In addition, the project will provide alternative forms of transportation to serve the student population and facilitate ease of travel between the subject site and Greystone Campus as well as other destinations. Given the on-site amenities and provision of alternative transportation, the project is expected to provide sufficient ancillary functions to support the functionality of the student dormitory use and which are of a design that is consistent with the overall aesthetic.*

11. Whether access to the property and circulation systems are safe and convenient for pedestrians, cyclists and vehicles;

*Primary automotive access will from Pratt Avenue and Vineyard Road, both of which were found to provide adequate circulation and access to the project site and have been conditioned to be improved to address project specific impacts. Onsite circulation and access is provided via one-way access road off of Vineyard Road and exiting at Pratt Avenue. This access road is expected to provide convenient vehicular site access. In addition, the project will be subject to Mitigation Measure Trans-2, which amongst other things, requires that the applicant introduce a Class II bike lane along westbound Pratt Avenue (northern side) extending from the project site to the intersection of SR 29 (Main Street)*

*and Pratt Avenue and restripe for a fog line along eastbound Pratt (southern side) extending from the project site to the intersection of SR 29 thereby promoting more safe and convenient connectivity for bicyclists. Accordingly, the project is expected to promote safe and convenient access for all types of transportation.*

12. Whether natural features are appropriately preserved and integrated with the project;

*As a previously developed site, the Vineyard Lodge Housing site does not contain any significant natural features with the exception of some Coast Live Oak Trees. To accommodate the proposed buildings, the project will remove two (2) Coast Live Oaks, which pursuant to Mitigation Measure BIO-1, shall be replaced in-kind and at a ratio of three (3) new 15 gallon trees for every one tree removed. A portion of replacement oaks may be accommodated on the Greystone Campus if site constraints are such that all replacement trees cannot be accommodated within the proposed site plan. As such, the project will integrate natural features to the extent possible and where that is not possible, will mitigate accordingly.*

13. Whether the materials, textures, colors and details of construction are an appropriate expression of its design concept and function and whether they are compatible with the adjacent and neighboring structure and functions;

*Please refer to response No. 7.*

14. In areas considered by the board as having a unified design character or historical character, whether the design is compatible with such character;

*Please refer to response No. 4*

15. Whether the landscape design concept for the site, as shown by the relationship of plant masses, open space, scale, plant forms and foliage textures and colors create a desirable and functional environment and whether the landscape concept depicts an appropriate unity with the various buildings on the site;

*The proposed landscape plan will feature a variety of trees, shrubs, and sod. The majority of existing Camphor trees at property frontage will be maintained. The landscape plan will feature 21 plant types which will be distributed throughout the site and promote continuity and unity throughout the site as well as soften the look of paved parking areas around the periphery of the site and provide shade.*

16. Whether plant material is suitable and adaptable to the site, capable of being properly maintained on the site, and is of a variety which is suitable to the climate of St. Helena;

*With the exception of the sod, all proposed plant materials are considered "low" water use plantings and are expected to be adaptable to the St. Helena climate. Further, all plantings on site are required to comply with the City of St Helena Municipal Water Efficient Landscape Ordinance, which regulates landscaping water use.*

17. Whether sustainability and climate protection are promoted through the use of green building practices such as appropriate site/architectural design, use of green building materials, energy efficient systems and water efficient landscape materials.

*As detailed herein, the project will use efficient fixtures and comply with Title 24 building standards. In addition, most landscaping will be comprised of low water use planting and will comply with the City of St Helena Municipal Water Efficient Landscape Ordinance. Further, the project will limit parking so as to avoid inducing vehicular travel demands and Green House Gas production by promoting use of alternative transportation and ride sharing. As such, the project will promote sustainable practices and climate protection.*

- C. SETBACK VARIANCE. Pursuant to Municipal Code Section 17.172.050, the Planning Commission makes the following variance findings to support the motion to approve a setback variance:

- (a) A hardship peculiar to the property, not created by any act of the owner, exists. In this context, personal, family or financial difficulties, loss of prospective profits, neighboring violations, are not hardships justifying a variance.

*The currently configured parcel was created in 1971 subject to dedication of a 20 foot strip of land along the northwesterly side of Pratt Avenue, creating a 60 foot right of way. As demonstrated in the applicant's setback variance request, neighboring properties were either (1) not required to dedicate land, or (2) were required to dedicate only a 10 foot strip of land. In addition, the property has a unique triangle shape with its widest and most developable portion immediately adjoining the property line subject to the special Pratt Avenue setback requirement. Literal enforcement of the 36 foot setback requirement from the property line—which encroaches 10-20 feet more into the property than does the property line at neighboring properties—would create a hardship peculiar to the property.*

- (b) The Variance is necessary for the preservation and enjoyment of substantial property rights of the applicant which are possessed by other properties in the same district and in the same vicinity; and that a Variance, if granted, would not constitute a special privilege of the recipient not enjoyed by his or her neighbors.

*Granting a variance would not constitute a special privilege for the property relative to neighboring properties. Six neighboring homes on the northwesterly side of Pratt Avenue are situated within the special 36 foot setback, none of which were required to dedicate a 20 foot strip of land like that of the subject property. The proposed development plan will exhibit a greater setback than what currently exists for the Vineyard Lodge 1 building (proposed for demolition). In light of the above, it is found that granting a setback variance is necessary for the preservation and enjoyment of the applicant's substantial property rights that*

*are possessed by nearby properties that are developed in similar proximity to the northwestern boundary of Pratt Avenue.*

- (c) The authorization of the Variance will not be of substantial detriment to adjacent properties, and will not materially impair the purpose and intent of this Chapter or the public interest, nor adversely affect the General Plan.

*Authorization of the Variance will not be of substantial detriment to adjacent properties, nor will it materially impair the public interest, as the new developed portion of the property will be located further from Pratt Avenue than the existing Vineyard Lodge I, proposed for demolition. In addition, large mature trees along a substantial portion of the site frontage and along its other borders will screen the views of the new dormitory development. Recognizing the unique nature of the property and granting a Variance does not impair the purpose and intent of the Code's Variance chapter.*

*The chapter's stated purpose is, in part, to allow for deviation from a strict application of the Code in the event that a property exhibits an unusual shape or other exceptional characteristic, and as a result would be subjected to practical difficulties or undue hardship in their development. Authorization of the Variance is consistent with St. Helena's longstanding efforts to manage growth by encouraging further development of already developed parcels, rather than removal of vineyards within City limits, and would not adversely affect the General Plan. The project's 123-bed expansion to serve a projected enrollment expansion of 100 students will allow students who currently compete for housing with members of the St. Helena workforce to move into student dormitories; freeing up that housing would benefit St. Helena families and employees.*

- (d) The condition or situation of the specific piece of property for which the Variance is sought is not so general or recurrent in nature as to make reasonably practicable the formulation of a general regulation for such condition or situation

*The property has a unique shape and was required to dedicate a larger strip of land relative to other nearby properties subject to the 36 foot special setback. Accordingly, the property's condition is not so general or recurrent in nature to make formulation of a general regulation addressing the issue reasonably practicable.*

- (e) The Variance and any buildings or structures permitted by the Variance will not be detrimental to the public health, safety and welfare of the community.

*Neither the Variance nor structures permitted by it will be detrimental to community public health, safety, and welfare. Granting the Variance will allow development of new student dormitories further removed from Pratt Avenue than the existing Vineyard Lodge I building. The applicant has designed the dormitory buildings to be partially screened by large, mature trees located along the site's*

*borders. Reducing parking spaces on the site and restricting supply of parking permits for student dormitory residents will remove vehicles from the City's streets, particularly St. Helena Highway. Student residents will have ample transportation alternatives: the frequent shuttle service between the property and the Greystone Campus, free access to on-site bicycles and the new bicycle lane provided by the Culinary Institute of America along Pratt Avenue, and the St. Helena shuttle and VINE transportation. The parking Variance further discourages private automobile trips by Culinary Institute of America students in and around St. Helena, and therefore confers a benefit to the community.*

D. PARKING VARIANCE. Pursuant to Municipal Code Section 17.172.050, the Planning Commission makes the following variance findings to support the motion to approve a parking variance:

- (a) A hardship peculiar to the property, not created by any act of the owner, exists. In this context, personal, family or financial difficulties, loss of prospective profits, neighboring violations, are not hardships justifying a variance.

*Imposition of the Code's parking requirement for a "rooming, boarding, or lodging house" or "hotel" in the student dormitory context would create a hardship peculiar to the property. Rooming, boarding, or lodging houses traditionally serve individuals unaffiliated with a college or university, who in a community such as St. Helena likely would require use of an automobile for daily activities. Similarly, hotels in St. Helena traditionally serve visitors exploring the region's amenities by private automobile. Requiring one parking space for each guestroom in those contexts is justifiable given the expected patterns of vehicle use, and the potential that failure to provide ample parking spaces could negatively affect neighboring properties. The Culinary Institute of America's students, on the other hand, are offered shuttle service for their daily trips to and from the Greystone Campus, do not require a car for the vast majority of their daily school-related activities, and are offered on-demand car rental for personal trips as well as access to free bicycles on site. Imposition of a one space per dormitory room requirement would create a hardship by dramatically changing the project as proposed and would require elimination of an open quad gathering area and potential reduction in number of student beds in favor of a hardscape parking lot.*

- (b) The Variance is necessary for the preservation and enjoyment of substantial property rights of the applicant which are possessed by other properties in the same district and in the same vicinity; and that a Variance, if granted, would not constitute a special privilege of the recipient not enjoyed by his or her neighbors.

*The Variance would not constitute a special privilege for the property relative to neighboring properties, none of which are developed with student dormitories that require limited on-site parking. Given the unique and limited travel patterns of student residents of the dormitory, with the Variance both the property and*



*neighboring properties will be subject to minimum parking requirements tailored to actual expected travel patterns and parking space demand, and neither the property nor neighboring properties will be required to provide unnecessary parking spaces reducing enjoyment of substantial property rights.*

- (c) The authorization of the Variance will not be of substantial detriment to adjacent properties, and will not materially impair the purpose and intent of this Chapter or the public interest, nor adversely affect the General Plan.

*Authorization of the Variance will not be of substantial detriment to adjacent properties, nor will it materially impair the public interest. The Culinary Institute of America will provide shuttle and on-demand car rental service, will impose a highly restrictive permit system both at the property and the Greystone Campus discouraging students without assigned parking from bringing cars to St. Helena, will provide free bicycles for use by students, and is amenable to restrictions on parking in the surrounding area to benefit nearby residents by discouraging student parking off the property. The Variance serves the public interest by effectively removing vehicles from City streets, particularly St. Helena Highway, encouraging environmentally-friendly and efficient transportation to and from the Greystone Campus. The parking Variance does not impair the purpose and intent of the Code's Variance chapter. The chapter's stated purpose is, in part, to allow variation from strict application of the Code where extraordinary situations or conditions mean that literal enforcement would involve practical difficulties or would cause undue hardship. Here, requiring unnecessary parking spaces would work against the public interest and cause undue hardship to the property and the school. Authorization of the Variance is consistent with City and regional policies encouraging use of alternate modes of travel, both to reduce harm to the environment and to take traffic off local roads, and would not adversely affect the General Plan. These policies and goals are consistent with the project's shuttle service and free bicycle program that reduce the need for parking and provides further support for the parking Variance.*

- (d) The condition or situation of the specific piece of property for which the Variance is sought is not so general or recurrent in nature as to make reasonably practicable the formulation of a general regulation for such condition or situation

*Formulation of a general regulation is not reasonably practicable given the lack of other student dormitories in the City, the targeted transportation options provided to the Culinary Institute of America's students, and consistency with parking reduction practices at other California campuses as discussed in the Crane Transportation Memo that justify the Variance.*

- (e) The Variance and any buildings or structures permitted by the Variance will not be detrimental to the public health, safety and welfare of the community.

*Neither the Variance nor structures permitted by it will be detrimental to community public health, safety, and welfare. Granting the Variance will allow development of new student dormitories further removed from Pratt Avenue than the existing Vineyard Lodge I building. The applicant has designed the dormitory buildings to be partially screened by large, mature trees located along the site's borders. Reducing parking spaces on the site and restricting supply of parking permits for student dormitory residents will remove vehicles from the City's streets, particularly St. Helena Highway. Student residents will have ample transportation alternatives: the frequent shuttle service between the property and the Greystone Campus, free access to on-site bicycles and the new bicycle lane provided by the Culinary Institute of America along Pratt Avenue, and the St. Helena shuttle and VINE transportation. The parking Variance further discourages private automobile trips by Culinary Institute of America students in and around St. Helena, and therefore confers a benefit to the community.*

- E. Pursuant to Municipal Code Section 17.124.030 (H), the Planning Commission further finds that the Vineyard Lodge Housing Site constitutes an "unlisted use" and determines that based on the particularities of the proposed project, including the dormitory-use, established shuttle program, and provision of on-demand rental cars and bicycles, the provision of 69 designated parking spaces is sufficient to serve the project site.
- F. USE PERMIT. Pursuant to Municipal Code Section 17.168.050, the Planning Commission finds that The Vineyard Lodge dormitories are appurtenant to the CIA at Greystone and provide affordable and convenient lodging for students enrolled in a culinary program. As conditioned, it is expected that the project would operate in an acceptable manner and therefore, the Planning Commission makes the following Use Permit findings to support the motion to approve the use permit:
1. That the proposed use would not generate odors, fumes, dust, light, glare, radiation or refuse that would be injurious to surrounding uses or to the community.

*The site operation is expected to be substantially similar to that currently existing. There is no expectation that the expansion of the student housing would generate odors, fumes, dust, light, glare, radiation or refuse that would be injurious to surrounding uses or to the community.*

2. That the proposed use would not generate levels of noise that adversely affect the health, safety, or welfare of neighboring properties or uses.

*At project operation, the onsite land use at the Vineyard Lodge Housing Site and associated noise environment will continue to be typical of a multi-unit development (dormitories) and subject to the City's noise exposure standards. The expansion of the Vineyard Lodge Housing site is not expected to introduce a substantial permanent increase in the ambient noise environment due to activities onsite or as a result of stationary or mobile sources. The noise*

*generating elements of the proposed project such as outdoor conversations, mechanical equipment, the operation of landscaping equipment, car engines and car doors would be similar to the existing noise environment present on-site and in the vicinity. The project is expected to introduce noise elements at levels that are generally consistent with the ambient noise conditions.*

3. That the proposed use would not generate traffic noise in excess of the "normally acceptable" range identified in the General Plan.

*As detailed in the Noise Impact Study (Appendix L of the IS/MND), the project is expected to add less than 8 trips to Pratt Avenue during the a.m. and p.m. peak hours. This would constitute a negligible increase in traffic noise of less than 0.5 dB which falls well below the threshold of a perceptible change of 3 dB. As such implementation of the proposed project will not substantially increase traffic noise in the area.*

4. That the proposed use would not make excessive demands on the provision of public services including water supply, sewer capacity, energy supply, communication facilities, police protection, and fire protection.

*The Project will not result in substantial adverse impacts associated with any public facilities or services. The project site is located adjacent to the urban limit line and is well served by existing public utilities and services. The project will not generate a substantial increase in demands that warrant the expansion or construction of new public facilities. The project site is also located proximate to the police and fire stations. Additional fire service and police calls may occur as a result of the project. However, the project will be subject to the payment of development impact fees, including the Public Safety Impact Fee which funds equipment and facilities' costs for Police and the Fire Departments that may go towards vehicles, capital equipment, and building improvements so as to maintain a high level of public safety. Accordingly, the project will not place excessive demands on any public services.*

5. That the proposed use would provide adequate ingress and egress to and from the proposed location.

*The project's internal circulation plan has been reviewed and meets all requirements of the St. Helena Public Works & Utilities and Fire Departments. Site circulation was determined to be adequate, including sufficient street widths to allow for fire truck turn around and sufficient access to residential buildings. Therefore, ingress and egress is considered adequate.*

6. That allowing the proposed use would not conflict with the City's goal of maintaining the economic viability of a local serving economy.

*The proposed student housing is appurtenant to the Culinary Institute of America Greystone Campus. The housing would not displace local serving uses nor impair the City's viability of maintaining a local serving economy.*

7. That the proposed use would be compatible with surrounding land uses and would not conflict with the purpose established for the district within which it would be located.

*The Vineyard Lodge site exhibits a land use and zoning designation of PQP: Public-Quasi-Public. The PQP zoning designation does not prescribe specific development standards, but rather stipulates that all projects within the PQP zoning district be subject to a conditional use permit and that development standards shall be established through the use permit review process. These regulations help guarantee that incompatible development and/or activities can be avoided by requiring such projects be held to a high level of scrutiny and are vetted through the public review process, CEQA review, and would be conditioned accordingly. Given that the proposed use serves an infill and expansion of an existing use there is no expectation that the proposed project would introduce an element that would conflict with the intent of the PQP zoning designation.*

8. That the proposed use would not be in conflict with the City's General Plan.  
*As detailed, herein the project would comply with applicable General Plan policies.*

9. That the proposed use would not be injurious to public health, safety, or welfare.  
*The proposed project consists of infill student housing that would operate in a manner substantially similar to the existing Vineyard Lodge Housing. As such, the project would not be injurious to health, safety, or welfare.*

10. That granting the use permit would not set a precedent for the approval of similar uses whose incremental effect would be detrimental to the City or would be in conflict with the General Plan.

*Use permits are considered on a case by case basis and based on the specific merits of a given project. Accordingly, the granting of this use permit would not influence future decisions or otherwise set a precedent.*

11. That, as demonstrated on a detailed plan submitted by the applicant, adequate off-street parking to accommodate the long term parking needs of employees and business owners and customers is available.

*The applicant proposes to provide a level of parking commensurate with the demand exhibited by the current residents of Vineyard Lodge Housing Site. At present, 31 percent of residents hold parking permits. It is reasonably expected that this level of demand would continue with implementation of the proposed*

*project which would translate to 69 designated spaces for the total proposed resident population of 224 students. .*

*There is no reason to believe that the student to vehicle ratio would substantially change under the proposed project, namely because (1) the CIA retains authority to issue or not issue parking permits, (2) the project will be subject to a condition of approval stipulating that it may not issue more than 69 parking permits, and (3) the site is uniquely operated in that it provides frequent reliable transportation to and from the Greystone Campus and to other locations, as needed, will provide three on-demand rental cars, and per mitigation measure LU-1, will be required to introduce a scalable bike share program that may be expanded as demand necessitates. As such, the project is expected to be able to accommodate long term parking needs for residents of the site.*

12. That the capacity of surrounding streets is adequate to serve the automobile and delivery truck traffic generated by the proposed use.

*As detailed in the Traffic Impact Report (Appendix Q of the IS/MND), the project's trip generation is minimal (approximately 4 trips during am and pm peak hours) and therefore the capacity of streets is presumed to be adequate.*

- G. The Planning Commission approves the demolition permit, design review, variances, and use permit for the above-described project with the following conditions of approval. The project shall be in conformance with all city ordinances, rules, regulations and policies in effect at the time of issuance of a building permit. The conditions noted below are particularly pertinent to this permit and shall not be construed to permit violation of other laws and policies not so listed.

#### **Conditions of Approval**

1. Project approvals shall be vested within one (1) year from the date of final action. A building permit for the use allowed under this approval shall have been obtained within one (1) year from the effective date of this action or the approval shall expire, provided however that the approval may be extended for up to two (2) one-year periods pursuant to the St. Helena Municipal Code, Section 17.08.130, Extension of Permits and Approvals. Any request for an extension of this approval shall be justified in writing and received by the Planning Department at least thirty (30) days prior to expiration.
2. The approvals shall not become effective until fourteen (14) calendar days after approval, providing that the action is not appealed by the City Council or any other interested party within that 14-day period.
3. All required fees, including planning fees, development impact fees, residential in-lieu housing fees, building fees, toilet retrofit fees, and St. Helena Unified School District fees shall be paid prior to issuance of a building permit. Fees shall be those in effect at the time of the issuance of the building permit.

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4. Upon approval of Resolution XX-XX, the Applicant shall provide the Planning Department with the Notice of Determination Fee required by Fish and Wildlife Code Section 711.4(d). The fee payment shall be made by check payable to the Napa County Clerk and in the amount required and published by the Napa County Clerk for such fee.
5. All Mitigation Measures enumerated in the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program are incorporated by reference and made conditions of approval.
6. Prior to issuance of any construction permits, these conditions of approval and the Mitigation and Monitoring and Reporting Program shall be included with the plan set. A copy of the approved plans shall be maintained on site when construction activities are underway.
7. Minor modifications to approved plans may be approved by the Planning Director insofar as they are in substantial conformance with this approval.
8. Pursuant to St. Helena Municipal Code Section 17.08.110, this permit shall run with the land and shall be binding upon all parties having any right, title or interest in the real property or any part thereof, their heirs, successors and assigns, and shall inure to their benefit and benefit of the City of St. Helena.
9. The primary purpose of this review is for compliance with the General Plan and Zoning Ordinance. The property owners or their designee shall be responsible for meeting with the Building Official, Fire Inspector and or Public Works Department to review compliance with Building Codes, Fire Codes and specific Public Works Standards including fire protection systems and any applicable accessibility standards of Title 24.
10. Construction shall be in compliance with plans submitted and reviewed by the Planning Commission on February 21, 2017, except as modified herein.
11. The site shall be kept clear at all times of garbage and debris. No outdoor storage is permitted.
12. A final lighting plan delineating building mounted lights shall be reviewed and approved by the Planning and Community Improvement Director prior to building permit issuance.
13. Trash bins shall not be visible from public right-of-way. The trash enclosure(s) will be constructed of opaque materials and be of sufficient size to permit the storage, removal and replacement of standard commercial size trash bins. No collection, storage or stacking of garbage, trash and refuse is permitted outside the trash enclosure.
14. All plantings shall be maintained in good growing condition. Such maintenance shall include, where appropriate, pruning, mowing, weeding, and cleaning of debris and trash, fertilizing and regular watering. Where necessary, plantings shall be replaced with other plant materials to insure continued compliance with applicable landscaping requirements, Irrigation systems shall be maintained in sound operating condition with heads periodically cleaned and replaced when missing to

ensure efficient watering and to maintain good health and vitality of landscape materials.

15. No signage is approved by this permit. A separate sign permit in compliance with the Municipal Zoning Code shall be obtained prior to installation of signage.
16. Property owners shall recognize that there exists a right to farm properties within the district and in the vicinity of the district. There is a good faith expectation that no complaints will occur regarding legal, normal agricultural activities on properties in the district or in the vicinity of the district. Such activities may include day or night disbursement of chemicals, and creation of dust, noise, or fumes.
17. In any action or proceeding to attack, challenge, invalidate, set aside, void or annul the City's approval of applicant's Project, in whole or in part, applicant shall defend, at its own expense and without any cost to the City, and with counsel acceptable to the City, and shall fully and completely indemnify and hold the City, its agents, officers, and employees harmless from and against any and all claims, causes of action, damages, costs, attorney's fees and liability of any kind, so long as the City reasonably promptly notifies the applicant of any such claim, action, or proceedings and the City cooperates fully in the defense of the action or proceedings.

#### **Planning Department Conditions**

18. As applicable, the permittee shall comply with any and all previous conditions of approval for the Vineyard Lodge Housing Site except as they may be explicitly modified by this action. To the extent there is a conflict between previous conditions of approval enumerated in Resolution No. 2004-33 or 2008-75 and these conditions of approval, these conditions shall supersede the previous permit and associated conditions.
19. Rental and/or occupancy of Vineyard Lodge dormitories shall be limited only to students who are actively enrolled at the Culinary Institute of America at Greystone in an Associate, Bachelor's, Master's and/or other Certificate Degree Programs with the exception that an on-site manager(s) shall reside on site consistent with State Housing Law, Title 25. The student's length of stay shall be commensurate with the respective degree program.
20. The Applicant shall provide a detailed Transportation Plan that describes the operation of (1) the shuttle service (2) the rental car service (3) parking permits for individual vehicles and (4) the specifics of the on-demand bike program as they relate to the Greystone Campus and Vineyard Lodge Housing Site. The Plan shall be subject to review and approval by the Planning and Community Improvement Director. A copy of the approved shall be provided and kept in the hard copy and digital project file and made available to the public as requested.
21. Parking Permits issued to students who are actively enrolled at the Culinary Institute of America at Greystone for the Vineyard Lodge Housing Site shall not exceed 69 permits at any one time.

22. No off-street parking is allowed on the Southside of Pratt Avenue, east of the Railroad Tracks.
23. The applicant shall obtain all required approvals in writing for communal kitchen facilities from the Napa County Department of Environmental Management. A copy of the approval shall be provided to the City and added to the project file.
24. Prior to issuance of building permit, the applicant shall enter into a Joint Water Use Agreement with the City and applicable to 830 Pratt Avenue and 2555 Main Street. The Joint Agreement shall authorize a maximum water allocation of 23.1 acre feet/year to be utilized by the two sites. The Joint Agreement shall include enforcement provisions and penalties if the allowance is exceeded in a given year. Said agreement is subject to the approval of the St Helena City Council.
25. Any significant change(s) to the operation of the approved use, including a substantial change in the operational characteristics of the site, intensity, or type(s) of uses shall require amendment to this use permit.

#### **Public Works Department Conditions**

26. Approval of this project shall be subject to the requirements of, and all improvements shall be designed and constructed in accordance with, the most current version at the time of improvement plan submittal, Caltrans Standards and Specifications, the City of St. Helena Municipal Code, the St. Helena Water and Sewer Standards, the St. Helena Street, Storm Drain and Sidewalk Standards, and all current federal, state and county codes governing such improvements.
27. For any improvements outside the existing building envelope, a grading and drainage plan showing topographic data, all easements, infrastructure onsite and directly adjoining, and an erosion control plan shall be submitted for review and approval by the City Engineer prior to the issuance of a building permit. If the project entails more than 50 cubic yards of soil disturbance, 10,000 square feet of disturbance area, a cut or fill of 3 feet or more, or alteration of any drainage pattern, a grading permit shall be required.
28. Drainage needs to be routed to prevent inundation of neighboring properties. Grading and/or site improvement plans shall show how 2-year and 10-year storm flows shall be infiltrated on site and/or diverted at the property lines to prevent inundation of neighboring properties. The applicant shall submit a drainage and hydrology analysis for the project impact, including downstream erosion potential, to the City of St. Helena Public Works Department with the Improvement Plan submittal in accordance with City of St. Helena, Napa County and State of California codes in effect at the time of improvement plan submittal.
29. Erosion and sediment control plans shall conform to the latest State and City codes at a minimum

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February 21, 2017



30. The applicant shall adhere to the latest Water Agreement with the City and shall incorporate water conservation practices into the proposed project per the Water Availability Analysis prepared by Summit Engineering, dated September 2, 2016. Any and all non-conforming appliances and plumbing fixtures shall be removed from the premises. The water conservation requirements shall be replicated in full on the architectural plans.
31. A detailed Post-Construction Stormwater Control Plan (SWCP) that identifies and sizes all permanent post-construction stormwater treatment BMPs shall be prepared and submitted for review approval. The Plan shall be prepared in accordance with the latest edition of the *Bay Area Stormwater Management Agencies Association (BASMAA) Post-Construction Manual* and the requirements of the State Water Resources Control Board Phase II Municipal Separate Storm Water System (MS4) General Permit (Order 2013-0001 DWQ).
32. A Post Construction Stormwater Operations and Maintenance Plan that provides a color-coded plan sheet showing all storm drain and water quality infrastructure that is to be maintained, along with detailed instructions and schedules for the ongoing maintenance and operation of all post-construction stormwater BMPs shall be submitted for review and approval by the City Engineer. Once approved, the property owner shall enter into an agreement with the City that provides the terms, conditions, and security associated with the ongoing requirements of the Post Construction Stormwater Best Management Practices.
33. Prior to Certificate of Occupancy, the Applicant shall enter into and record a Post-Construction Stormwater Operations and Maintenance Agreement with the City.
34. If the project includes 500 square feet or more of new landscaping and/or 2,500 square feet or more of rehabilitated landscape, the proposed landscaping shall comply with the State's Model Water Efficient Landscape Ordinance (MWELO).
35. A detailed Soils Investigation/Geotechnical Report shall be prepared and submitted for review. The report shall address, at a minimum, potential for liquefaction, R-values, expansive soils and seismic risk. The improvement plans shall incorporate all design and construction criteria recommended in the Geotechnical Report.
36. Unless otherwise explicitly permitted, all existing wells, septic tanks/systems and/or underground fuel storage tanks shall be abandoned under permit and inspection of Napa County Department of Environmental Services or other

designated agency. If there are none, the project engineer shall provide a letter describing the scope of the search done to make this determination.

37. Site plan shall show the location of any trees within the project area. Provide a tree protection plan for approval by the Public Works Director prior to approval of the building permit. The plan shall be coordinated with any civil grading/drainage/improvement plans.
38. The Applicant shall keep adjoining public streets free and clean of project dirt, mud, materials, and debris during the construction period, as is found necessary by the City Engineer.
39. The developer shall underground all on-site utility lines per St. Helena Municipal Code. The cost of undergrounding shall be the responsibility of applicant.
40. Due to the economic and engineering infeasibility of undergrounding regional serving overhead power lines, such existing lines may remain on overhead power poles.
41. Provide details of any and all proposed fencing, gates and/or walls on all plans submitted for building permit review.
42. Any new and modified existing water laterals, meters and backflow prevention devices shall be required and constructed in accordance with the current requirements of the City of St. Helena's Water Standards and the California Department of Health Standards. Existing meter boxes located within a driveway shall be retrofitted with a traffic-rated box. New laterals shall be located perpendicular to the water main and outside any driveway/drive aisle.
43. Remodels or new construction which requires fire sprinklers shall install an appropriately-sized water service with appropriate backflow and meter devices prior to Certificate of Occupancy. Fire system calculations shall be submitted with the Grading and Drainage Plan to verify fire service lateral and meter sizing. Deferred submittals are not accepted.
44. No construction shall commence until adequate access to fire water supply is available to building sites, and the Fire Chief shall ensure adequate access to fire water supply prior to issuance of building permits.
45. In order to confirm the theoretical assumptions in the provided sewer capacity study, the applicant is required to perform 7-day flow monitoring at the downstream sanitary sewer manholes (No. 6-5 and No. 6-18) to verify that the existing sewer pipe has adequate capacity to accommodate the proposed additional flows prior to building permit approval. Peak sewer flows will not be allowed to exceed 2/3 full pipe. If insufficient capacity is available at the site and

with the current infrastructure, a new sanitary sewer must be constructed with adequate capacity by the owner as a condition of the site development.

46. Construct frontage improvements in accordance with the *Frontage Improvement Plan* prepared by Summit Engineering, dated December 7, 2016. Said improvements shall include a full with grind and overlay of 0.10 feet and a cross section consisting of a minimum of 8' parallel parking, 5' bike lane, and 12' lanes (east and west).
47. Trash areas, dumpsters and recycling containers shall be enclosed and roofed per State and County standards to prevent water run-on to the trash area and water runoff from the area, to contain litter and trash so that it is not dispersed by the wind or run-off during waste removal. In the event that wine or food is disposed in these areas, the enclosed trash area shall drain to the sanitary sewer system. An area drain connected to the sanitary sewer shall be installed in the enclosure area and a structural control such as an oil/water separator or sand filter shall be included. No other area shall drain into the trash enclosure. A sign shall be posted prohibiting the dumping of hazardous materials into the sanitary sewer.
48. The applicant shall repair all public improvements that are damaged by the construction process in accordance with the City Water/Sewer/Street/Storm Drain/Sidewalk Standards prior to Certificate of Occupancy.
49. Existing streets being cut by new utility services will require edge grinding and an A.C. overlay per City standards, extent to be determined by the Public Works Department.
50. The applicant shall be required to obtain an encroachment permit for improvements on public right-of-ways prior to receiving a grading or building permit authorizing site work or construction activities on the site.

#### **Building Department Conditions**

51. A building permit is required for all onsite demolition, construction and/or change of occupancy.
52. The applicant will be required to comply with the codes adopted at the time the applicant applies for a building permit. At this time the City of St. Helena utilizes the 2013 Title 24 codes.
53. When submitting plans for a building permit, the plans shall include all documentation listed on the building permit application checklist.
54. The applicant shall provide a construction waste management plan with the building permit application.

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February 21, 2017

55. The plans for construction shall include a checklist for compliance with the California Green Buildings Standards Code, mandatory measures. Provide a reference on the checklist indicating where the mandatory measures can be found on the plans.
56. When submitting plans, the title page shall include all information referenced on the building permit application checklist Title Page requirements.
57. Building Permit application materials and plans shall include any documentation pertaining to special loads applicable to the design and the specified section of the code that addresses the condition; special inspections for any systems or components requiring special inspection; requirements for seismic resistance; and a complete list of deferred submittals at time of application. Any deferral of the required submittal items shall have prior approval of the Building Official however deferral of fire sprinkler design is not allowed.

**Fire Department Conditions**

58. Fire sprinklers and fire hydrants shall be installed as required by the Fire Department.

I HEREBY CERTIFY that the foregoing demolition permit, design review, and use permit for 2555 Main Street, and the foregoing demolition permit, design review, variances, and use permit for 830 Pratt Avenue were duly and regularly approved by the Planning Commission of the City of St. Helena at a regular meeting of said Planning Commission held on February 21, 2017 by the following roll call vote:

**AYES:**

**NOES:**

**ABSENT:**

**ABSTAIN:**

APPROVED:

ATTEST:

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Grace Kistner  
Chair, Planning Commission

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Noah Housh  
Planning Director

2555 Main Street/ 830 Pratt Avenue  
Demolition Permit, Variance, Design Review and Use Permit  
February 21, 2017

Attachment 2



1993 033516

OFFICIAL RECORDS OF  
NAPA COUNTY  
H. KATHLEEN BONDSRECORDING REQUESTED BY AND  
WHEN RECORDED MAIL TO:City Clerk  
City of St. Helena  
1480 Main Street  
St. Helena, CA 94574AT REQUEST OF: CITY OF ST HELENA  
10/15/1993 08:42 am  
Fee: \$ .00 Pgs: 2  
TT : \$ .00EXEMPT FROM RECORDING FEES -  
GOVERNMENT CODE SECTION 6103

CITY OF ST. HELENA, CALIFORNIA

Resolution No. 93-104

APPROVING A GENERAL PLAN AMENDMENT  
FOR CULINARY INSTITUTE OF AMERICA

## RECITALS

1. The Culinary Institute of America submitted an application for a General Plan Amendment, Rezoning and Use Permit on the property located on Main St. southwest of Deer Park Road, APN 9-131-03, on May 11, 1992.
2. The Planning Commission of the City of St. Helena, State of California, held a noticed public hearing on May 18, 1993; June 1, 1993; June 10, 1993; and June 29, 1993, on the Final EIR on the subject application and recommended certification of the Final EIR at the June 29, 1993, hearing.
3. The Planning Commission of the City of St. Helena, State of California, held a noticed public hearing on May 18, 1993; June 1, 1993; June 10, 1993; June 29, 1993; July 6, 1993; and July 20, 1993, on the subject application and recommended approval of a General Plan Amendment, Rezoning to PD and HP combining districts and a Use Permit at the the July 20, 1993, hearing.
4. The City Council of the City of St. Helena, State of California, held a noticed public hearing on August 10, and 24, 1993 and on September 14, 1993, on the Final EIR and subject application.

## RESOLUTION

## Section 1.

The City Council finds that:

- A. The project reflects changes in economic conditions such that the project site's size and topography and the characteristics of the main building and various outbuildings are not consistent with current winemaking practices and operations.

END OF DOCUMENT

- B. The naturally occurring physical constraints of the project's National Register historic Greystone Building and various outbuildings make the agricultural use of the project no longer feasible.

Section 2.

The City Council hereby approves a General Plan amendment for APN 9-131-03 from Agriculture to Public and Quasi-Public (PQP) subject to the adoption of the PQP designation in the new General Plan.

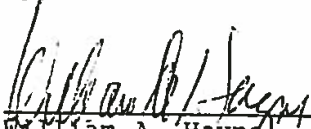
Approved by action of the City Council at a Regular Meeting held on September 14, 1993, by the following vote:

AYES: Mayor Hayne, Councilmembers Hardy, Gard, Heitz, Brown

NOES: None

ABSENT: None

Approved:

  
William A. Hayne  
Mayor of St. Helena

Attest:

  
Gene Armstead  
City Administrator/City Clerk



RECORDING REQUESTED BY AND  
WHEN RECORDED MAIL TO:

City Clerk  
City of St. Helena  
1480 Main Street  
St. Helena, CA 94574

EXEMPT FROM RECORDING FEES -  
GOVERNMENT CODE SECTION 6103



1993 033517

OFFICIAL RECORDS OF  
**NAPA COUNTY**  
H. KATHLEEN BONDS

AT REQUEST OF: CITY OF ST HELENA

10/15/1993 08:42 am  
Fee: \$ .00 Pgs: 12  
TT : \$ .00

# RESOLUTION NO. 93-105

APPROVING A USE PERMIT OF THE CITY OF ST. HELENA,  
STATE OF CALIFORNIA, GRANTED TO THE  
CULINARY INSTITUTE OF AMERICA

PROPERTY OWNER: Culinary Institute of America APN: 9-131-03

WHEREAS, the Culinary Institute of America submitted an application for a Use Permit consisting of the re-use and renovation of the 117,000 square foot Greystone Cellars for a 200 student educational facility with educational, administrative, maintenance, receiving-storage, 125 seat restaurant and campus retail uses and the construction of two dormitories for 72 students, landscaping and parking on a 13 acre site located on Hwy. 29 southwest of Deer Park Road ; and

WHEREAS, the Planning Commission of the City of St. Helena, State of California, held a noticed public hearing on June 1, June 10, June 15, June 29, 1993, July 6, 1993, and July 20, 1993.

WHEREAS, the City Council of the City of St. Helena , State of California, held a noticed public hearing on August 10, August 24, and September 14, 1993.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of St. Helena as follows:

Section 1. The City Council has certified a Final Environmental Impact Report for the project.

Section 2. The City Council makes the following findings:

1. That the proposed use would not generate odors, fumes, dust, light, glare, radiation or refuse that would be injurious to surrounding uses or to the community.

2. That the proposed use would not generate levels of noise that adversely affect the health, safety, or welfare of neighboring properties or uses.

3. That the proposed use would not generate traffic noise in excess of the "normally acceptable" range identified in the General Plan.

4. That the proposed use would not make excessive demands on the provision of public services including water supply, sewer capacity, energy supply, communication facilities, police protection, and fire protection.

5. That the proposed use would provide adequate ingress and egress to and from the proposed location.

6. That allowing the proposed use would not conflict with the City's goal of maintaining the economic viability of a local serving economy.

7. That the proposed use would be compatible with surrounding land uses and would not conflict with the purpose established for the district within which it would be located.

8. That the proposed use would not be in conflict with the City's General Plan.

9. That the proposed use would not be injurious to public health, safety, or welfare.

10. That granting the use permit would not set a precedent for the approval of similar uses whose incremental effect would be detrimental to the City or would be in conflict with the General Plan.

11. That, as demonstrated on a detailed plan submitted by the applicant, adequate off-street parking to accommodate the long term parking needs of employees and business owners and customers is available.

12. That the capacity of surrounding streets is adequate to serve the automobile and delivery truck traffic generated by the proposed use.

Section 3. The Use Permit for the above described use is granted subject to compliance with all mitigation measures identified in Resolution No. 93-102 and the mitigation monitoring program identified in Resolution No. 93-103 as well as the following conditions. Permit shall be in conformance with all City ordinances, rules, regulations and policies in effect at the time of issuance of a building permit. The conditions noted below are particularly pertinent to this permit and shall not be construed to permit violation of other laws and policies so listed.

#### USE PERMIT CONDITIONS

Planning Department Standard Conditions:



1. The Use Permit must be used within one (1) year of approval of the General Plan Amendment and Rezonings by the City Council or it shall expire. This permit is valid for this use only. A new permit must be applied for upon any change in use. The permit will expire if the use is discontinued pursuant to then existing ordinances and regulations.
2. The Use Permit shall not become effective until ten (10) days after approval or as conditioned by the City, providing that the action is not appealed by the City Council or any other interested party within that 10 day period. The time within which judicial review of the final decision on the project must be sought is governed by the Code of Civil Procedure, 1094.6.
3. Any request for an extension of the Use Permit must be justified in writing and received by the Planning Department at least thirty (30) days prior to expiration.
4. All required fees shall be paid prior to issuance of building permit. Compliance with all permit conditions shall occur in accordance with specific regulations but in all cases no later than prior to occupancy or initiation of use unless another time is set by law or by this approval.
5. The applicant will defend and indemnify and hold the City, its agents, officers, and employees harmless of any claim, action or proceedings to attack, set aside, void or annul an approval so long as the City promptly notifies the applicant of any such claim, action, or proceedings and the City cooperates fully in the defense of the action or proceedings.
6. Provided they are in general compliance with the Use Permit, minor modification may be approved by the Planning Director.

Planning Department Special Conditions:

7. This Use Permit is valid for the facility as described herein as operated by the Culinary Institute of America. Should the applicant abandon or otherwise cease use of the site as an educational facility as granted by this permit, neither the applicant, a lessee nor a new owner may use this property for commercial/non-educational purposes without first obtaining permit approval from the City of St. Helena.
8. Construction activities and business operation shall be in compliance with all mitigation measures adopted in the certified Final EIR dated September, 1993.
9. The property shall be rezoned to a Public Quasi Public land use designation to establish conformity with the 1993 General Plan.

9a. This Use Permit shall not be valid until the City Council certifies the Final Environmental Impact Report and approves the General Plan Amendment and Rezoning to PD and HP.

10. Project Description. The project is limited to the following uses. Additional uses are subject to Use Permit Amendment.

A. The facility is to be used as an advanced cooking school. The student population shall not exceed 104 students; interim limits on student population are based on conditions regulating housing of students on site. (see Condition 12.F.) Students shall be limited to practicing professionals in the food and beverage industry. The school shall verify professional status of the students prior to enrollment.

B. Only instructors and students enrolled at the campus shall be allowed to use school accommodations. The length of stay shall not exceed the number of days of instruction.

The maximum stay for students at the campus shall be thirty (30) days; however, students may on occasion stay over 30 days in which case they shall be considered transient occupants for purposes of the transient occupancy tax. Weekends shall be included within the length of stay when the weekends occur within the time period of the class schedule.

The average length of instruction in any quarter shall be two weeks/student (i.e. 10 days/student). The average length of instruction is the summation of the number of students at each length of stay times that length of stay; the full value being divided by the total number of students. Records of length of instruction shall be reviewed by the City one year from the effective date of this permit.

C. A public restaurant may be operated as an accessory use to the school within the main winery building; restaurant seating shall be limited to a total of 125 seats, including both indoor and outdoor dining. The restaurant may be open six days per week, with one seating for lunch and one seating for dinner. Seating in the restaurant shall be limited to 11:30 a.m.-9:00 p.m. No banquet facilities or lounge area shall be provided.

Outdoor dining shall be limited to a new terrace to be located at the second story level on the north side of the main winery building. Outdoor dining shall be consistent with the Zoning Regulations in effect at the time of operation.

- D. A 3,100 s.f. campus store may be operated as an accessory use to the school within the main winery building. The store shall be limited to the hours of operation of 11:00 a.m. - 6:00 p.m. Items sold at the retail store shall be directly related to the food and beverage industry or to the incidental needs of the student residents, such as toiletries and stationary. Only food items prepared by students are permitted to be sold at the campus store. No other food items may be sold. Bottled wine sales may be permitted. No other retail spaces shall be created.

The intent of the store is to provide services to the instructors and students and not to provide merchandise for the general public nor cater to visitors to the campus. There shall be no exterior signage identifying the campus store. The school shall not advertise the store in its literature or other publications. No winetasting facility is authorized by this permit approval. The campus store shall not be subleased to another entity but may be managed by another entity. No retail or other space shall be sublet to operators other than C.I.A. One year from the effective date of this use permit the City Council shall review the store operation to determine consistency with store hours, items sold and management.

- E. The second and third floor south wing rooms may continue to be used by Napa County non-profit organizations for charity events, by the applicant for up to two community events per year, or by private parties for non-paying guests based upon availability and school needs. These events shall be regulated by any special events regulations in effect.

Valet parking shall be provided for all special and community events if they are held during hours that the restaurant is open and/or when designated on-site parking is not adequate. No parking shall be permitted along Highway 29/Main Street or Deer Park Road.

- F. The gatehouse and still house shall remain vacant. Future use shall be approved by Use Permit Amendment.
- G. Tours of the C.I.A. facility shall be limited to no more than eight (8) per month with a maximum of forty (40) persons per tour with no fees charged to the tour groups. C.I.A. shall not enter into any contractual agreements with tour agencies for visits to the facility including use of the restaurant. Promotional materials for the school shall not mention tours or retail sales. Signs shall indicate that no tours are allowed. This condition is not to discourage

carpooling or use of vans/buses by patrons of the restaurant.

11. Approval is given for the demolition of the following buildings which are not on the National Register: the existing storage/utility building; the exterior public restroom north of the main building; the boiler room west of the main building; and the small security building in front of the main building.
12. Construction shall be substantially in compliance with plans marked Exhibits A through H and dated June 29, 1993.
  - A. Phasing and floor areas shall be as shown on Proposed Project Phasing, Table 1, dated 6/29/93.  
  
Floor area which is vacant or undesignated shall not be used without a Use Permit Amendment.
  - B. No facade modifications/exterior changes beyond those shown on Exhibits A through H nor interior changes affecting historical features shall be made to the main winery building, the gatehouse, the stone entrance arch and the still house without further Design Review approval based on the Secretary's Standards.  
  
Applicant shall submit an inventory of existing counter-balanced wood doors indicating which doors are proposed for removal and the justification for removal. Planning Director shall approve removal of doors prior to issuance of building permits.
  - C. All structural plans shall be reviewed and approved by an independent preservation architect and approved by the Planning Director using the Secretary's Standards for Rehabilitation.
  - D. The design of the central atrium shall be subject to Final Design Review by the Planning Director and independent preservation architect prior to the issuance of building permits and shall be consistent with Exhibit I dated 8/24/93. The design shall be consistent with the Secretary of Interior Standards as specified in Mitigation Measure 42a of the Certified EIR.
  - E. The design of the outdoor terrace and restaurant entrance shall be subject to Final Design Review by the Planning Director and independent preservation architect prior to the issuance of building permits and shall be consistent with Exhibit J dated 8/24/93. No outdoor kitchens, except a grill, shall be permitted. The balusters proposed for the outdoor terrace and other design elements shall conform to the Secretary's

Standards for Rehabilitation as required by the certified EIR.

- F. In order to maximize the number of students residing on campus, all school accommodations shall be occupied first; residents of Napa County are exempt from this provision. Two dormitory buildings are authorized in conjunction with phases 1 and 2 of the project by this use permit. The total authorized school enrollment shall be the maximum capacity of the onsite accommodations plus the authorized offsite housing. Offsite housing shall be consistent with City regulations pertaining to transient housing.

Maximum enrollment allowed by this permit shall not exceed 104 students. Up to 68 students may be housed off-campus after the first dormitory is completed for no more than thirty-six (36) months. If no more than one dormitory building is constructed by the end of the 36th month, the maximum student enrollment shall immediately be reduced to 68 unless a use permit amendment is approved by the City. No students shall be enrolled until the first dormitory is completed and issued a certificate of occupancy. City shall evaluate ratio of off-site to on-site students no less than semi-annually based on housing information supplied to the City by the applicant including:

(1) data on off-site housing location including the total number of students that occupy off-site housing in St. Helena as well as the total number of students that find off-site housing outside of St. Helena. Data on students who occupy off-site housing in and outside St. Helena shall include addresses of places of stay (to determine if some of the students are staying in illegal units).

(2) number of students housed on-site and off-site including number of students that occupy off-site housing in St. Helena who also brought members of their family and/or other guests.

(3) class time duration of stay including average length of stay by all students.

(4) use of van service versus private transportation including number of students that either provided their own transportation or utilized CIA van service.

(5) number of Napa County residents enrolled

Final plans showing the design and phased construction of the first two dormitories shall be approved by the Planning Director prior to issuance of building permits

and shall conform to Exhibits K and L dated 8/24/93. The design of a third dormitory building shall be subject to a Use Permit Amendment. The maximum percent of school enrollment housed off-campus shall be reevaluated at the time of Use Permit Amendment for the third dormitory.

The total number of campus housing units after approval of a third dormitory shall be contained in no more than 3 new buildings which shall be constructed on existing building pads or in previously disturbed areas where no significant tree removal or grading is required. Housing may also be located in existing buildings subject to a Use Permit Amendment.

Height of buildings shall not exceed 36'. No buildings shall be located on the slope behind the Greystone Building with a height that exceeds the roofline of the Greystone building.

13. Water Use.

- A. Domestic water will be supplied by the City. Water use shall be limited to an average of 12,500 gpd. No City water shall be used for irrigation. Off-site well water shall be used for landscaping; reclaimed wastewater shall be used for agricultural irrigation.
- B. A phased retrofit program to install low flow toilets and shower fixtures in a minimum of 135 existing residential units shall be submitted and approved by the City Engineer prior to issuance of building permits. The City Council may require additional homes be retrofit or water-rationing be implemented if water use at Greystone Cellars exceeds an average of 12,500 gpd. Retrofit of existing residential units shall include, but not be limited to, replacement of toilets with low-water use fixtures and installation of water flow-restrictors on sink and shower facilities.
- C. Future improvements to the City water line resulting from the project, which may impact the Tunnel of the Elms shall be subject to CEQA environmental analysis and use permit amendment. Other water improvements related to this project may be subject to additional environmental analysis, Use Permit Amendment and Napa County and Regional Water Quality Control board approval.

14. Wastewater treatment shall be processed off-site at Markham Vineyards.

- A. Compliance with conditions specified in communication

from Napa County Department of Environmental Management dated June 9, 1993.

- B. Future connection to the City sewer line to serve this site which may impact the Tunnel of the Elms shall not be permitted. Other wastewater improvements related to this project may be subject to additional environmental analysis, a Use Permit Amendment, and Napa County and Regional Water Quality Control Board approval.

15. Traffic

- A. A left-turn pocket for northbound traffic on Hwy 29 shall be constructed with 75 foot acceleration tapers and 150 foot deceleration tapers, or other design standards as specified by Caltrans.
- B. The driveway from Hwy 29 should have a return radius of 30 feet per figure 405.7 of the Highway Design Manual.
- C. A bike shoulder shall be constructed along the project frontage of Hwy. 29.
- D. Internal circulation shall be provided by one entrance/exit (the use of the historic arch will be discontinued) and a one way internal system.
- E. A van service shall operate as necessary to connect CIA students to public transit, airport service, etc. Van service shall also be provided as needed for the students living off-campus to transport them to classes and non-school activities. Promotional materials and course flyers shall encourage the use of the shuttle service and public transportation in lieu of private vehicles.
- F. Installation of street improvements as required by the Public Works Director.

16. Parking is required as follows:

| <u>USE</u>              | <u>STANDARD</u> | <u>SPACES REQUIRED</u> |
|-------------------------|-----------------|------------------------|
| Restaurant/125 seats    | 1/5 seats       | 25                     |
| Dormitories/72 rooms    | 1/room          | 72                     |
| Store/3,100 sq. ft.     | 1/300 sq. ft.   | 10                     |
| Gate House/2,200 sq.ft. | 1/300 sq. ft.   | 7                      |
| Staff/45                | 1/staff         | 45                     |
| TOTAL                   |                 | 159                    |

The preliminary site plans show a total of 174 spaces for Phase I. Phase II will add 17 parking spaces for a total of 191. The additional parking spaces may be needed for additional dormitory spaces and/or special events.

The final parking and landscaping plan shall delineate areas for access and use by delivery vehicles.

17. Landscaping / Tree removal / Open Space Easement

- A. The construction of dormitories one and two will require removal of 20 trees, 11 of which are recommended for removal due to poor condition or crowding even without construction. Thirteen trees will be removed for the Phase 1 dorm and 7 for the Phase 2 dorm. The 20 trees to be removed shall be replaced on the site with 40 new trees of minimum 15 gallon size with a 5 year followup care and protection program.
- B. An open space management plan for the open space area to be dedicated by easement shall be prepared and approved by the Planning Director prior to issuance of grading permits. The plan shall specify that the undeveloped portion of this property shall be retained in its natural state with provisions for routine maintenance. Ongoing management shall also be included.
- C. A final landscape plan, shall be approved through Design Review prior to issuance of building permits. Landscaping shall be installed prior to occupancy. Said plan shall use native plants to blend into the natural area to the rear of the winery building and shall explore use native plants elsewhere on site. Plans shall also show exterior lighting.
- D. Landscape plans shall comply with Ordinance 92-20, Water Efficient Landscape Standards and Procedures, requiring drought tolerant landscaping and low water irrigation systems to be designed and verified by a landscape professional. Design compliance with the regulations, installation and water use shall be verified by a landscape professional. Landscaping shall not block vision from exits.
- E. Well water shall be used for all landscaping and reclaimed wastewater shall be used for all agricultural irrigation. A backflow prevention device shall be installed prior to occupancy unless waived by the Public Works Director.



18. No signs or awnings shall be installed without approval of a Sign Permit or Design Review. Signage shall not exceed the current sign area on the site and shall be designed within the context of the historical designation of the property.
19. Noise. All mechanical equipment and school operations shall meet the standards set forth in the City's Noise Element of the General Plan.
20. Additional construction requirements are as follows:
  - a. Exterior lighting shall be directed or shielded so as to prevent glare onto any residential property or public roadway.
  - b. Installation of approved interior fire sprinkler system and minimum fire flow for fire suppression, unless waived by the Fire Chief.
  - c. One hour minimum fire resistant construction on all exterior walls within 10' of property boundary. Fire resistant construction of interior walls shall be determined by type of occupancy.
  - d. Fire equipment shall be inspected annually by the Fire Department.
  - e. The applicant shall provide for the enclosed storage of trash and separated recyclable materials. The design of the trash storage and recycling area shall be reviewed and approved by the Planning Director. Trash bins shall not be visible from public right of way.

21. SCHOOL IMPACT CONDITION

The Project Sponsor shall enter into an agreement or memorandum of understanding with the St. Helena School District/Napa Valley College to provide for a scholarship program that would be equivalent to \$20,000. The scholarship will be provided to two students, one from Napa Valley College and one for someone who had graduated from the St. Helena school system. The terms of the agreement or memorandum of understanding shall be negotiated between the project sponsor and St. Helena School District/Napa Valley College and modifications may be made subject to agreement by affected parties. Copies of the agreement or memorandum of understanding shall be submitted to the City and included in the project file.

This condition is imposed based on representations made by the project sponsor as a matter of public record during the project hearings in response to school district impacts

END OF DOCUMENT

identified in the Environmental Impact Report prepared on the project.

22. Minor amendments to this Use Permit may be approved by the Planning Director.
23. This use permit shall not be effective until all fees due the City of St. Helena have been paid.
24. Applicant shall comply with all recommendations contained in the Harding Lawson Associates geotechnical report dated December 9, 1992.

Section 4. The City Clerk is hereby directed to record this Use Permit at the office of the County Recorder of the County of Napa.

I HEREBY CERTIFY that the foregoing Use Permit was duly and regularly adopted by the City Council of the City of St. Helena at a regular meeting of said City Council held on the 14th day of September, 1993, by the following roll call vote:

AYES: Mayor Hayne, Councilmembers Gard, Hardy, Heitz, Brown

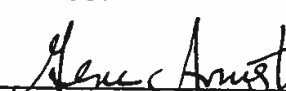
NOES: None

ABSENT: None

Approved:

  
William A. Hayne  
Mayor of St. Helena

Attest:

  
Gene Armstead  
City Administrator



RECORDING REQUESTED BY AND  
WHEN RECORDED MAIL TO:

Planning Director  
City of St. Helena  
1480 Main Street  
St. Helena, CA 94574

EXEMPT FROM RECORDING FEES -  
GOVERNMENT CODE SECTION 6103



1997 002139 ✓  
OFFICIAL RECORDS OF  
NAPA COUNTY  
H. KATHLEEN BONDS

AT REQUEST OF: CITY OF ST HELENA  
01/30/1997 08:43 am  
Fee: \$ .00 Pgs: 5  
TT : \$ .00

*ILVDC*

### USE PERMIT AMENDMENT NO. 96-95

### USE PERMIT AMENDMENT OF THE CITY OF ST. HELENA STATE OF CALIFORNIA, GRANTED TO THE CULINARY INSTITUTE OF AMERICA

PROPERTY OWNER: Culinary Institute  
of America

APN: 09-131-03

#### Recitals

WHEREAS, Use Permit 93-105 was approved with conditions by the St. Helena City Council on September 14, 1993 to allow establishment of the Culinary Institute of America at the historic Greystone Cellars building located on a 13 acre site on the west side of Hwy 29 south of Deer Park Road; and

WHEREAS, Ferdinand Metz, on behalf of the Culinary Institute of America, submitted an application for a Use Permit Amendment to amend conditions 10C, 10D, 10G; and 12E

WHEREAS, The Planning Commission of the City of St. Helena, State of California, held noticed public hearings on October 15, 1996 and approved amendments to conditions 10C, 10D, 10G, and 12E.

WHEREAS, The City Council of the City of St. Helena, State of California, appealed the action of the Planning Commission and held a noticed public hearing on December 10, 1996 and approved the Use Permit Amendment as follows:

**Section 1.** The City Council hereby finds that the previously certified Environmental Impact Report remains adequate for the purpose of assessing the impacts associated with the proposed use permit amendments.

**Section 2.** The City Council makes the following findings:

1. That the proposed use permit amendments would not generate odors, fumes, dust, light, glare, radiation or refuse that would be injurious to surrounding uses or to the community.
2. That the proposed use permit amendments would not generate levels of noise that adversely affect the health, safety, or welfare of neighboring properties or uses.
3. That the proposed use permit amendments would not generate traffic noise in excess of the "normally acceptable" range identified in the General Plan.
4. That the proposed use permit amendments would not make excessive demands on the provision of public services including water supply, sewer capacity, energy supply, communication facilities, police protection, and fire protection.
5. That the proposed use permit amendments would provide adequate ingress and egress to and from the proposed location.
6. That allowing the proposed use permit amendments would not conflict with the City's goal of maintaining the economic viability of a local serving economy.
7. That the proposed use permit amendments would be compatible with surrounding land uses and would not conflict with the purpose established for the district within which it would be located.
8. That the proposed use permit amendments would not be in conflict with the City's General Plan.
9. That the proposed use permit amendments would not be injurious to public health, safety, or welfare.
10. That granting the use permit amendments would not set a precedent for the approval of similar uses whose incremental effect would be detrimental to the City or would be in conflict with the General Plan.
11. That, as demonstrated by the applicant and conditions imposed by the city, adequate off-street parking to accommodate the long term parking needs of employees and business owners and customers is available.
12. That the capacity of surrounding streets is adequate to serve the automobile and delivery truck traffic generated by the proposed use permit amendments.

**Section 3.** The Use Permit Amendment for the above described use is granted to amend only conditions 10C, 10D, 10G, and 12E. All other conditions included in Resolution 93-105 shall remain in effect as originally imposed when the Culinary Institute of America was approved to locate as the historic Greystone Cellars Building. This use permit and use permit amendment shall be in conformance with all City ordinances, rules, regulations and policies in effect at the time of issuance of a building permit. The conditions noted below are particularly pertinent to this use permit amendment and shall not be construed to permit violation of other laws and policies not so listed.

### **USE PERMIT CONDITIONS**

1. The Use Permit amendment is valid for one (1) year from the date of approval or it shall expire. This permit is valid for this use only. A new permit must be applied for upon any change in use. The permit will expire if the use is discontinued pursuant to then existing ordinances and regulations.
2. Any request for an extension of the Use Permit must be justified in writing and received by the Planning Department at least thirty (30) days prior to expiration.
3. A building permit shall be obtained prior to commencing any construction associated with this use permit amendments. All required fees shall be paid prior to issuance of building permits. Compliance with all permit conditions shall occur in accordance with specific regulations but in all cases no later than prior to occupancy or initiation of use unless another time is set by law or by this approval.
4. The applicant will defend and indemnify and hold the City, its agents, officers, and employees harmless of any claim, action or proceedings to attack, set aside, void or annul an approval so long as the City promptly notifies the applicant of any such claim, action, or proceedings and the City cooperates fully in the defense of the action or proceedings.
5. Provided they are in general compliance with the Use Permit and Use Permit Amendment, minor modification may be approved by the Planning Director.
6. This Use Permit Amendment shall run with the land and shall be binding upon all parties having any right, title or interest in the real property or any part thereof, their heirs, successors and assigns, and shall inure to their benefit and benefit of the City of St. Helena.
7. Construction activities and business operation shall be in compliance with all mitigation measures adopted in the Environmental Impact Report certified prior to approval of the use permit to establish the use.
8. The City Council may require additional homes be retrofit or water-rationing be implemented if water use at Greystone Cellars exceeds an average of 12, 500 gpd. Retrofit of existing residential units shall include, but not be limited to, replacement of toilets with low-water use fixtures and installation of water flow-restrictors on sink and shower facilities.
9. Compliance with all conditions of the Napa County Conservation and Development Department and Napa County Environmental Management Department. The applicant shall provide documentation from these County agencies to the City of St. Helena verifying compliance with Napa County permits prior to establishment of the uses or business operations approved in conjunction with this use permit amendment.

10. This use permit amendment amends conditions 10C, 10D, 10G, and 12E as follows:

- 10C. A public restaurant may be operated as an accessory use to the school within the main winery building; restaurant seating shall be limited to a total of 125 seats, including both indoor and outdoor dining. the restaurant may be open seven days per week. Seating in the restaurant shall be limited to 11:00 a.m. - 10:00 p.m. No banquet facilities or lounge area shall be provided. Outdoor dining shall be limited to a new terrace to be located at the second story level on the north side of the main winery building. When outdoor seating is open indoor seating will be adjusted to ensure only 125 seats are active. Outdoor dining shall be consistent with the zoning regulations in effect at the time of operation.
- 10D. A 3,100 s.f. campus store may be operated as an accessory use to the school within the main winery building. The store shall be limited to the hours of operation of 10:00 a.m. - 7:00 p.m. Items sold at the retail store shall be directly related to the food and beverage industry or to the incidental needs of the student residents, such as toiletries and stationery. Only food items prepared by students or specialty products such as olive oils, vinegars and spices shall be permitted to be sold at the campus store. No deli food items may be sold. Bottled wine sales may be permitted. No other retail spaces shall be created. The store may be advertised in educational, food service, trade and Napa county newspapers of record. No advertising will be placed in national consumer publications or visitor oriented publications. Site signage will be placed to direct visitors to the store, a maximum of 2 in main lot, one by restaurant and one by the main entry. No signage for the campus store shall be visible from Hwy. 29. No wine tasting facility is authorized by this permit approval. The campus store shall not be subleased to another entity but may be managed by another entity. No retail or other space shall be sublet to operators other than CIA.
- 10G. The CIA. may offer tours to the general public. The tours shall be limited to no more than six per day between the hours of 10:00 a.m. and 3:00 p.m. The tours will be limited to 50 guests per tour. A minimum charge of \$5.00 per person will be collected unless the CIA chooses to donate a tour for a local civic group. The activity will include a presentation on the history and mission of CIA, a short cooking demonstration and a campus tour. Promotional materials for the school shall not mention tours or retail sales. Tours shall not be advertised in any publications nor shall any signs visible from Hwy 29 indicate that tours are offered at the facility. The tours approved by this condition are limited to visitors or students who have arrived at the CIA facility for other purposes; the tours are not intended to add additional impacts to use of the site. The tour schedule will include times convenient to lunch and dinner hours to reduce in and out traffic. These tours shall not ~~shall not~~ create a parking impact which exceeds the available on-site parking spaces provided. Parking attendants

END OF DOCUMENT

shall be provided if required by the Police Chief. CIA shall not enter into any contractual agreements with tour agencies for visits to the facility including use of the restaurant. The tour operation shall be reviewed within six months and again in twelve months from the date of approval of this use permit amendment or when excessive impacts are identified by staff, the Planning Commission or City Council. The purpose of this review is to address identified impacts and revisions to the tour operation may result as part of this review.

- 12E The design of the outdoor terrace and restaurant entrance shall be subject to final design review by the planning director and independent preservation architect prior to the issuance of building permits and shall be consistent with exhibit j dated 8/24/93. No outdoor kitchens, except a grill and wood fire oven, shall be permitted. The equipment must comply with the clean air act. The balusters proposed for the outdoor terrace and other design elements shall conform to the Secretary's Standards for Rehabilitation as required by the certified EIR.

**Section 3.** The City Clerk is hereby directed to record this Use Permit Amendment at the office of the County Recorder of the County of Napa.

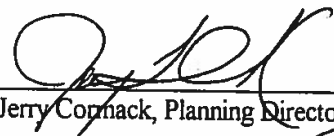
**I HEREBY CERTIFY** that the foregoing Use Permit Amendment was duly and regularly approved by the City Council of the City of St. Helena at a regular meeting of said City Council held on December 10, 1996 by the following roll call vote:

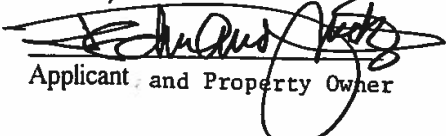
**AYES:** Councilmember Slavens  
Councilmember Savidge  
Mayor Brown

**NOES:** Councilmember Heitz

**ABSENT:** Councilmember Gard

**ATTEST:**

  
Jerry Cornack, Planning Director

  
Applicant and Property Owner



RECORDING REQUESTED BY AND  
WHEN RECORDED MAIL TO:

Planning Director  
City of St. Helena  
1480 Main Street  
St. Helena, CA 94574

EXEMPT FROM RECORDING FEES -  
GOVERNMENT CODE SECTION 6103



AT REQUEST OF:

1998 014602  
OFFICIAL RECORDS OF  
NAPA COUNTY  
JOHN TUTEUR  
CITY OF ST. HELENA  
05/28/1998 08:17 am  
Fee: \$ .00 Pgs: 4  
TT : \$ .00

USE PERMIT AMENDMENT NO. 97-162

USE PERMITAMENDMENT OF THE CITY OF ST. HELENA  
STATE OF CALIFORNIA, GRANTED TO THE  
CULINARY INSTITUTE OF AMERICA  
2555 MAIN STREET

*IVC*

PROPERTY OWNER: Culinary Institute of America APN: 009-131-003

Recitals

Roger Riccardi, representative of the Culinary Institute of America submitted an application for a Use Permit Amendment to convert approximately 3,000 sq. ft. of floor area on the third floor, south wing of the Greystone Building to offices in the Winery: Planned Development: Historic Preservation zoning district; and

The Planning Commission of the City of St. Helena, State of California, held a noticed public hearing on February 3, 1998.

The Planning Commission of the City of St. Helena, State of California, approved the Use Permit Amendment on the following basis:

**Section 1.** The Planning Commission hereby determines that the Environmental Impact Report adopted with the approval of this project on September 14, 1993 (Resolution 93-102) remains adequate for this project.

(97projects/97-162/UPA

9801 0002 0001



**Section 2.** The Planning Commission makes the following findings to support the motion to deny the Use Permit::

1. That the proposed use would not generate odors, fumes, dust, light, glare, radiation or refuse that would be injurious to surrounding uses or to the community.
2. That the proposed use would not generate levels of noise that adversely affect the health, safety, or welfare of neighboring properties or uses.
3. That the proposed use would not generate traffic noise in excess of the "normally acceptable" range identified in the General Plan.
4. That the proposed use would not make excessive demands on the provision of public services including water supply, sewer capacity, energy supply, communication facilities, police protection, and fire protection.
5. That the proposed use would provide adequate ingress and egress to and from the proposed location.
6. That allowing the proposed use would not conflict with the City's goal of maintaining the economic viability of a local serving economy.
7. That the proposed use would be compatible with surrounding land uses and would not conflict with the purpose established for the district within which it would be located.
8. That the proposed use would not be in conflict with the City's General Plan.
9. That the proposed use would not be injurious to public health, safety, or welfare.
10. That granting the use permit amendment would not set a precedent for the approval of similar uses whose incremental effect would be detrimental to the City or would be in conflict with the General Plan.
11. That, as demonstrated on a detailed plan submitted by the applicant, adequate off-street parking to accommodate the long term parking needs of employees and business owners and customers is available.
12. That the capacity of surrounding streets is adequate to serve the automobile and delivery truck traffic generated by the proposed use.

**Section 3.** The Use Permit Amendment for the above described use is granted subject to compliance with the following conditions. Permit shall be in conformance with all City ordinances, rules, regulations and policies in effect at the time of issuance of a building permit. The conditions noted below are particularly pertinent to this permit and shall not be construed to permit violation of other laws and policies not so listed.

(97)projects/97-162/UPA

9801 6602 0002

**USE PERMIT CONDITIONS**

1. The Use Permit Amendment is valid for one (1) year from the date of approval or it shall expire. This permit is valid for this use only. A new permit must be applied for upon any change in use. The permit will expire if the use is discontinued pursuant to then existing ordinances and regulations.
2. The Use Permit Amendment shall not become effective until fourteen (14) calendar days after approval, providing that the action is not appealed by the City Council or any other interested party within that 14 day period.
3. Any request for an extension of the Use Permit Amendment must be justified in writing and received by the Planning Department at least thirty (30) days prior to expiration.
4. All required fees, including planning fees, shall be paid prior to issuance of building permit. Fees shall be those in effect at the time of the issuance of the building permit.
5. Compliance with all permit conditions shall occur in accordance with specific regulations but in all cases no later than prior to occupancy or initiation of use unless another time is set by law or by this approval. Occupancy or final inspection of a project may be withheld if all conditions, including payment of fees for services rendered by the City, are not met.
6. The applicant will defend and indemnify and hold the City, its agents, officers, and employees harmless of any claim, action or proceedings to attack, set aside, void or annul an approval so long as the City promptly notifies the applicant of any such claim, action, or proceedings and the City cooperates fully in the defense of the action or proceedings.
7. Provided they are in general compliance with the Use Permit, minor modification may be approved by the Planning Director.
8. This Use Permit Amendment shall run with the land and shall be binding upon all parties having any right, title or interest in the real property or any part thereof, their heirs, successors and assigns, and shall inure to their benefit and benefit of the City of St. Helena.
9. This Use Permit Amendment authorizes the conversion of approximately 3,000 square feet of the third floor, south wing of the Greystone building to offices consistent with the floor plan labeled Exhibit A, dated 2/3/98.

**Section 4.** The City Clerk is hereby directed to record this Use Permit Amendment at the office of the County Recorder of the County of Napa.

**END OF DOCUMENT**

**I HEREBY CERTIFY** that the foregoing Use Permit was duly and regularly approved by the Planning Commission of the City of St. Helena at a regular meeting of said Planning Commission held on February 3, 1998 by the following roll call vote:

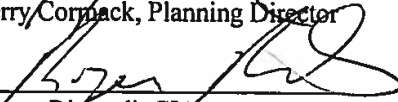
**AYES:** Commissioners Fanucci, Nielsen, Beatty, Chairman York

**NOES:** None

**ABSENT:** Commissioner Ryan



  
Jerry Cornack, Planning Director

  
Roger Riccardi, CIA

5/12/98

RECORDING REQUESTED BY AND  
WHEN RECORDED MAIL TO:

Planning Director  
City of St. Helena  
1480 Main Street  
St. Helena, CA 94574

EXEMPT FROM RECORDING FEES -  
GOVERNMENT CODE SECTION 6103

**USE PERMIT AMENDMENT NO. 2001-60**

**USE PERMIT AMENDMENT OF THE CITY OF ST. HELENA  
STATE OF CALIFORNIA, GRANTED TO  
THE CULINARY INSTITUTE OF AMERICA FOR THE  
RESTORATION AND USE OF THE STILL HOUSE**

PROPERTY OWNER: Culinary Institute of America APN: 009-131-003

Recitals

Mark Erickson, representative of the Culinary Institute of America submitted an application for a Use Permit Amendment to allow the restoration and use of the Still House building located on the campus of the Culinary Institute of America at Greystone, 2555 Main Street, St. Helena, in the W:PD:HP: Winery:Planned Development: Historic Preservation Overlay zoning district.

The use of the Greystone Building as an educational facility for the Culinary Institute of America was approved by Use Permit in 1993. Condition 10 F of Use Permit 93-105 states that the buildings identified *as the gatehouse and still house shall remain vacant and that future use shall be approved by Use Permit Amendment.*

The still house was originally used by the Christian Brothers as a distillery for their winery. The site, primarily the Greystone Cellars and stone entry arch are listed on the National Register of Historic Places and the Napa County Historic Resources Inventory. The renovation of the still house was designed and will be overseen by Architectural Resources Group, a well respected architectural and planning firm that specializes in historic preservation projects. The renovation will be done in accordance with the Secretary of the Interior's Standards of Rehabilitation. The project will replace some missing historic features, including the east/west gables and cupola, through the use of historic photographs and the physical evidence presented by the building itself. Deteriorated features will be repaired rather than replaced. Replacement, when necessary, will conform to the original features of the building.

The Culinary Institute of America will relocate their Professional Wine Studies Program from classroom theaters within the Greystone Building where it is currently held. The space that

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it vacates within the Greystone Building will be utilized by other instructional programs. No increase in the number of students is anticipated or requested with this project.

The Planning Commission of the City of St. Helena, State of California, held a noticed public hearing on October 2, 2001.

The Planning Commission of the City of St. Helena, State of California, approved the Use Permit Amendment on the following basis:

**Section 1.** The Planning Commission hereby finds that this project is exempt from the CEQA, the California Environmental Quality Act, pursuant to Section 15331 of the Guidelines. Class 31 consists of projects limited to maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation or reconstruction of historical resources in a manner consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitation, Restoring, and Reconstructing Historic Buildings. These federal standards describe means of preserving, rehabilitation, restoring, and reconstructing historic buildings without adversely affecting their historic significance.

**Section 2.** The Planning Commission makes the following Use Permit findings Section 27.439 to support the motion to approve the Use Permit:

1. That the proposed use would not generate odors, fumes, dust, light, glare, radiation or refuse that would be injurious to surrounding uses or to the community.
2. That the proposed use would not generate levels of noise that adversely affect the health, safety, or welfare of neighboring properties or uses.
3. That the proposed use would not generate traffic noise in excess of the "normally acceptable" range identified in the General Plan.
4. That the proposed use would not make excessive demands on the provision of public services including water supply, sewer capacity, energy supply, communication facilities, police protection, and fire protection.
5. That the proposed use would provide adequate ingress and egress to and from the proposed location.
6. That allowing the proposed use would not conflict with the City's goal of maintaining the economic viability of a local serving economy.
7. That the proposed use would be compatible with surrounding land uses and would not conflict with the purpose established for the district within which it would be located.
8. That the proposed use would not be in conflict with the City's General Plan.
9. That the proposed use would not be injurious to public health, safety, or welfare.

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10. That granting the use permit would not set a precedent for the approval of similar uses whose incremental effect would be detrimental to the City or would be in conflict with the General Plan.
11. That, as demonstrated on a detailed plan submitted by the applicant, adequate off-street parking to accommodate the long term parking needs of employees and business owners and customers is available.
12. That the capacity of surrounding streets is adequate to serve the automobile and delivery truck traffic generated by the proposed use.

**Section 3.** The Use Permit for the above-described use is granted subject to compliance with the following conditions. Permit shall be in conformance with all City ordinances, rules, regulations and policies in effect at the time of issuance of a building permit. The conditions noted below are particularly pertinent to this permit and shall not be construed to permit violation of other laws and policies not so listed.

#### **USE PERMIT CONDITIONS**

1. The Use Permit Amendment and Design Review shall be vested within one (1) year from the date of approval. A building permit for the use allowed under this Use Permit shall have been obtained within one (1) year from the effective date of the Use Permit or the Use Permit shall expire; provided however that the Use Permit may be extended for up to two (2) one-year periods pursuant to the St. Helena Municipal Code, Section 27.412, Extension of Permits and Approvals.
2. This permit is valid for this use only. New permits must be applied for upon any change in use. These permits will expire if the use is discontinued pursuant to then existing ordinances and regulations.
3. The Use Permit Amendment and Design Review shall not become effective until fourteen (14) calendar days after approval, providing that the action is not appealed by the City Council or any other interested party within that 14 day period.
4. Any request for an extension of the Use Permit Amendment and Design Review must be justified in writing and received by the Planning Department at least thirty (30) days prior to expiration.
5. All required fees, including planning fees, development fees, building fees toilet retrofit fees, and St. Helena Unified School District fees shall be paid prior to issuance of building permit. Fees shall be those in effect at the time of the issuance of the building permit.
6. Compliance with all permit conditions shall occur in accordance with specific regulations but in all cases no later than prior to occupancy or initiation of use unless another time is set by law or by this approval. Occupancy or final inspection of a project may be withheld if all conditions, including payment of fees for services rendered by the City, are not met.

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7. The applicant will defend and indemnify and hold the City, its agents, officers, and employees harmless of any claim, action or proceedings to attack, set aside, void or annul an approval so long as the City promptly notifies the applicant of any such claim, action, or proceedings and the City cooperates fully in the defense of the action or proceedings.
8. Provided they are in general compliance with the Use Permit, minor modification may be approved by the Planning Director.
9. This Use Permit Amendment and Design Review shall run with the land and shall be binding upon all parties having any right, title or interest in the real property or any part thereof, their heirs, successors and assigns, and shall inure to their benefit and benefit of the City of St. Helena.
10. The primary purpose of this review is for compliance with the General Plan and Zoning Ordinance. The owner/applicant is responsible for meeting with the Building Official / Fire Inspector to review compliance with Building and Fire Codes, including fire protection systems and the accessibility standards of Title 24.
11. The use of the property by the Culinary Institute of America was approved in 1993 as authorized by Use Permit 93-105. This Use Permit Amendment complies with Condition 10 F of Use Permit 93-105 which states that the buildings identified *as the gatehouse and still house shall remain vacant and that future use shall be approved by Use Permit Amendment*. No other conditions of approval of Use Permit 93-105 are modified by this permit.
12. Construction shall be in compliance with plans marked Exhibits A-D, dated 10/02/01.
13. Use of the Still House shall be for meeting and lecture rooms for the Professional Wine Studies Programs of the Culinary Institute of America.
14. Landscaping shall be complete prior to occupancy of the building. Landscape plans shall comply with Ordinance 92-20, Water Efficient Landscape Standards and Procedures. Plans shall be designed and verified by a landscape professional and shall include drought tolerant landscaping and low water irrigation systems. Landscaping shall not block vision from exits or at street intersections. If the landscape area is 2,500 square feet or greater, a landscape water flow meter shall be installed for verification of the amount of water being used for landscaping.
15. Exterior lighting shall be directed or shielded to prevent glare onto the public roadway or adjacent properties.
16. The applicant shall provide for the enclosed storage of trash and separated recyclable materials. The design of the trash storage and recycling area shall be reviewed and approved by the Planning Director.
17. Fire equipment shall be inspected annually by the Fire Department.

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18. Installation of a rapid entry Knox Box system, unless waived by the Fire Chief.

19. No signs, awnings, or facade modifications shall be installed or constructed without approval of a Sign Permit or Design Review.

20. This property is located within an agricultural district. There exists a right-to-farm the adjoining properties. There is a good faith expectation that no complaints will occur regarding legal, normal agricultural activities on the adjacent land. Such activities may include day or night disbursement of chemicals, and creation of dust, noise, or fumes.

21. To reduce disturbance of residents in the project vicinity, construction activities which generate noise that can be heard at the property line of any parcel of real property within the City limits shall be limited to 8:00 a.m. to 5:00 p.m. Monday through Saturday. Delivery of materials/equipment and cleaning and servicing of machines/equipment shall be limited to 7:00 a.m. to 6:00 p.m. Exceptions to these time restrictions may be granted by the Public Works Director for one of the following reasons: (1) inclement weather affecting work, (2) emergency work, or (3) other work, if work and equipment will not create noise that may be unreasonably offensive to neighbors as to constitute a nuisance. The City Engineer must be notified and give approval in advance of such work. No construction activities shall occur on Sundays or federal or local holidays that generate noise that can be heard at the property line of any parcel of real property within the City limits.

**Section 4.** The City Clerk is hereby directed to record this Use Permit at the office of the County Recorder of the County of Napa.

**I HEREBY CERTIFY** that the foregoing Use Permit was duly and regularly approved by the Planning Commission of the City of St. Helena at a regular meeting of said Planning Commission held on October 2, 2001 by the following roll call vote:

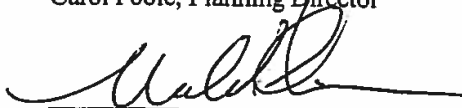
**AYES:** Commissioners Ryan, Philippakis, Chairman York

**NOES:** None

**ABSTAIN:** Commissioner Katz

**ABSENT:** Commissioner Wolf

  
Carol Poole, Planning Director

  
Mark Erickson  
Managing Director

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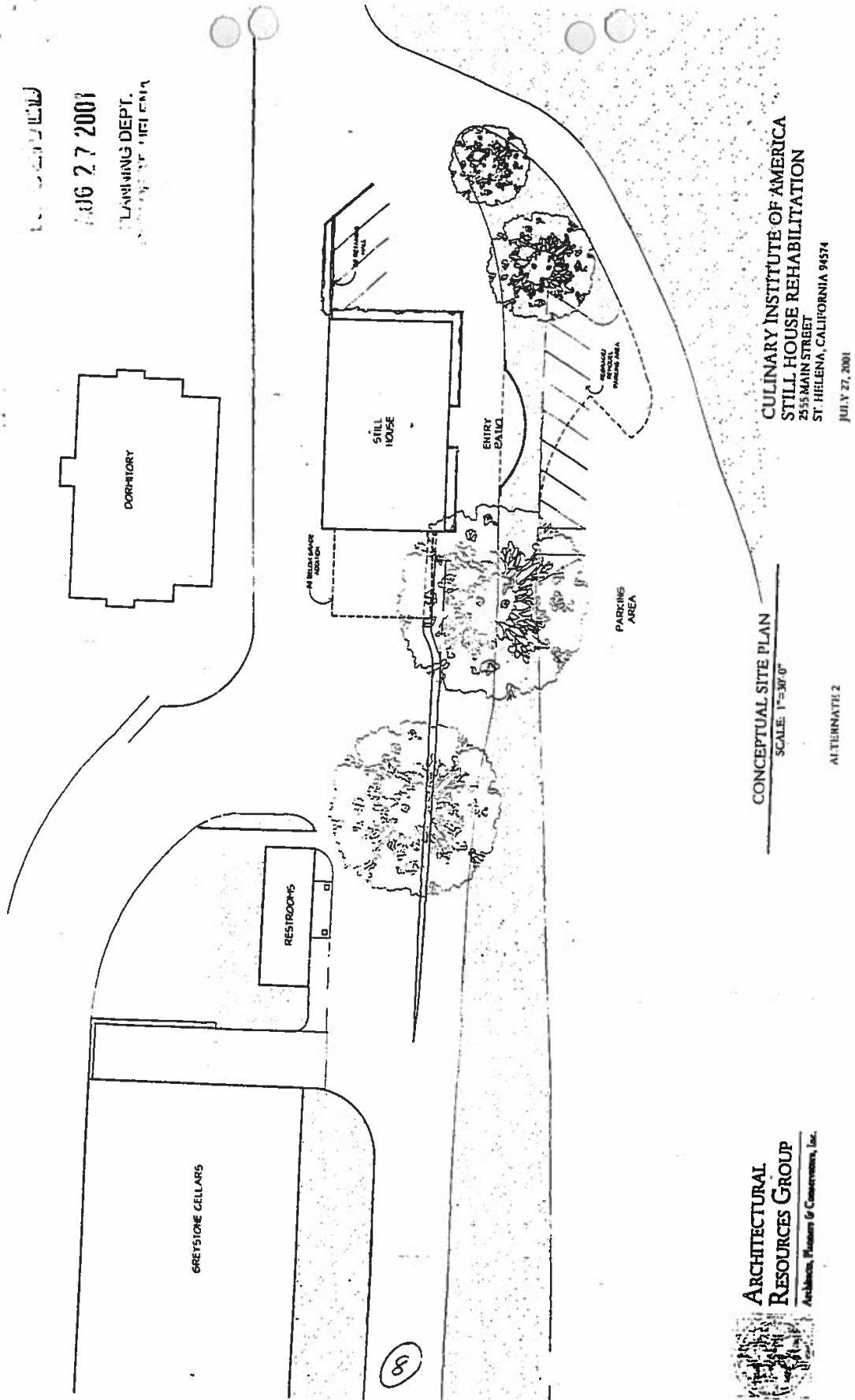
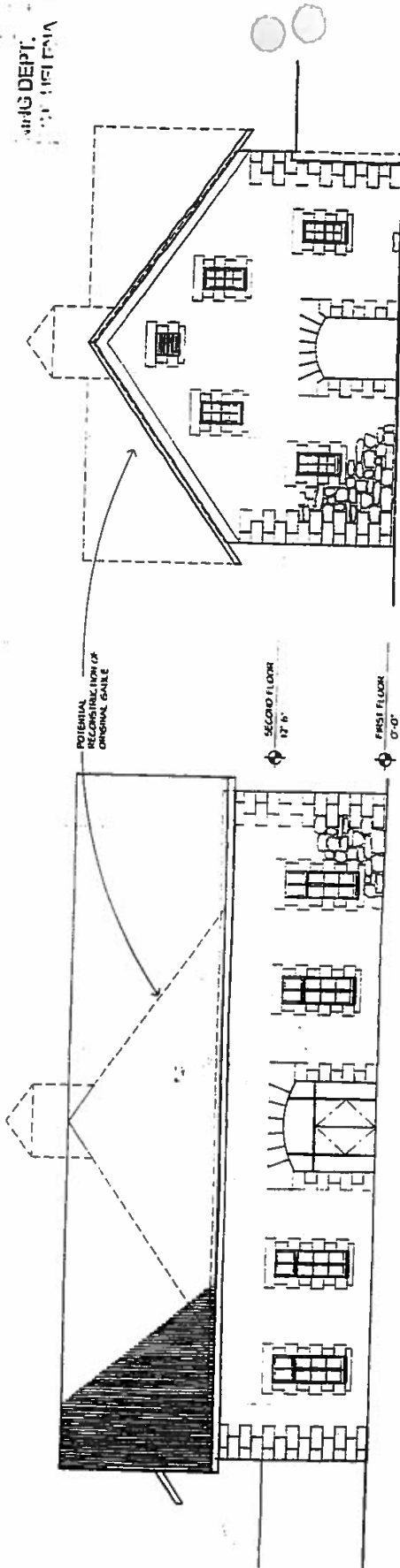


Exhibit A 10/02/01

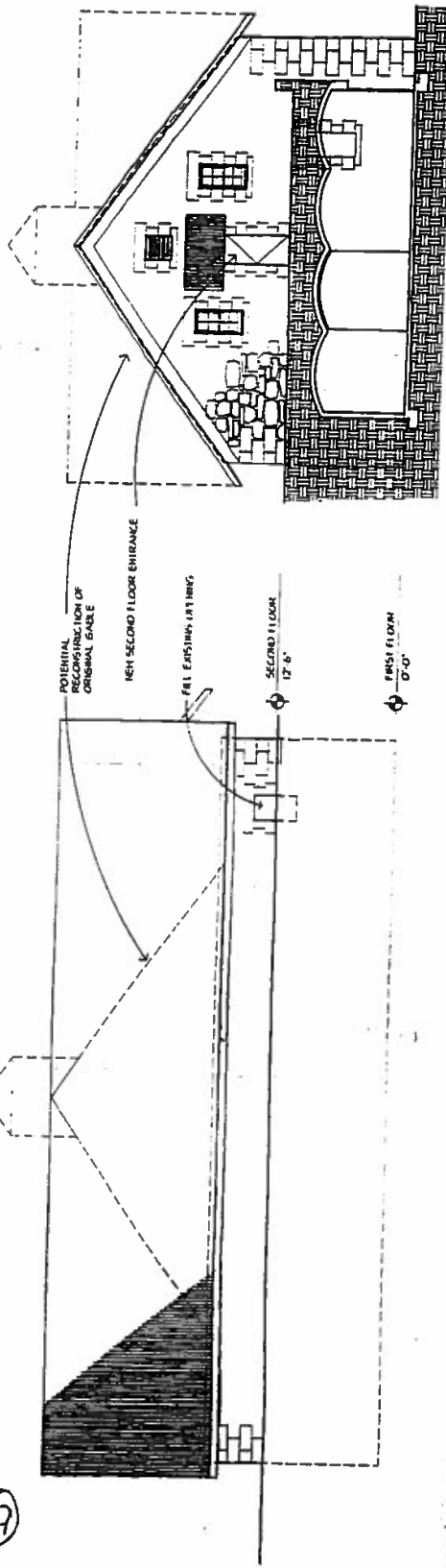
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AUG 27 2001

PLANS DEPT.  
CITY OF HILLEN



9



**ARCHITECTURAL  
RESOURCES GROUP**  
Architects, Planners & Constructors, Inc.

EXTERIOR ELEVATIONS  
SCALE: 3/32"=1'-0"

ALTERNATE 2

**CULINARY INSTITUTE OF AMERICA  
STILL HOUSE REHABILITATION**  
2555 MAIN STREET  
ST. HELENA, CALIFORNIA 94574

JULY 21, 2001

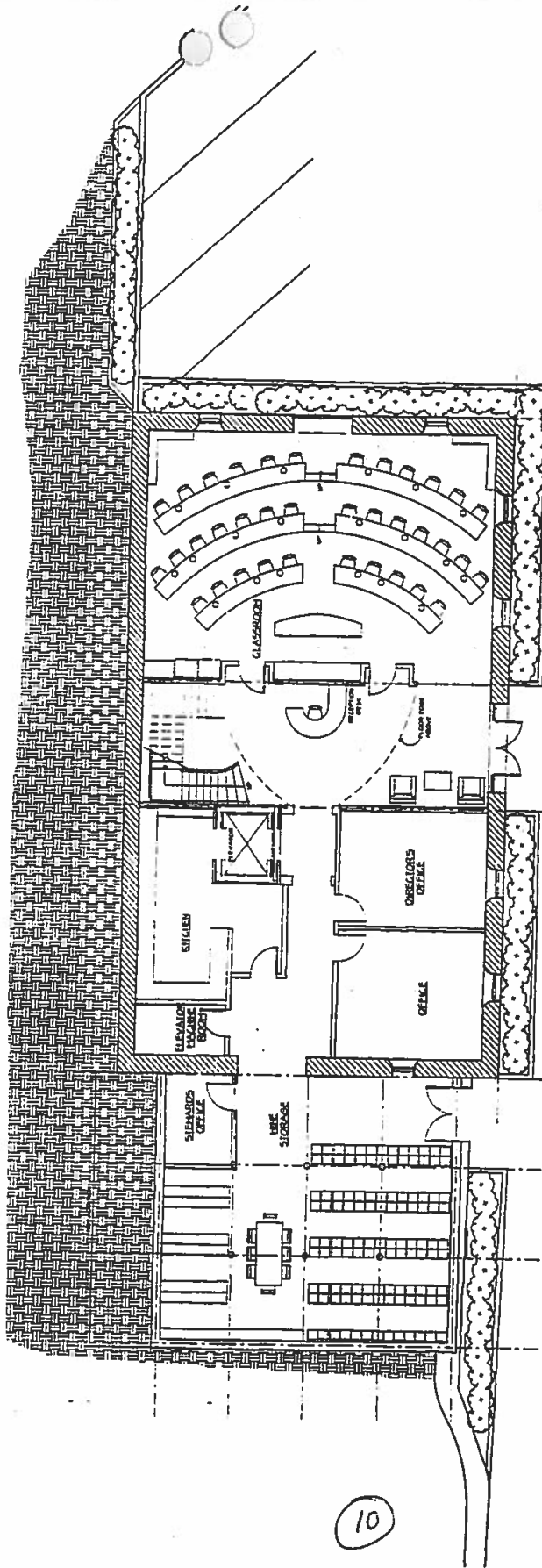


Exhibit B 10/02/01

10/27/2001

AUG 27 2001

PLANNING DEPT.



ARCHITECTURAL  
RESOURCES GROUP  
Architects, Planners & Constructors, Inc.

FIRST FLOOR PLAN  
SCALE: 3/32"=1'-0"

ALTERNATE 2

CULINARY INSTITUTE OF AMERICA  
STILL HOUSE REHABILITATION  
2555 MAIN STREET  
ST. HELENA, CALIFORNIA 94574

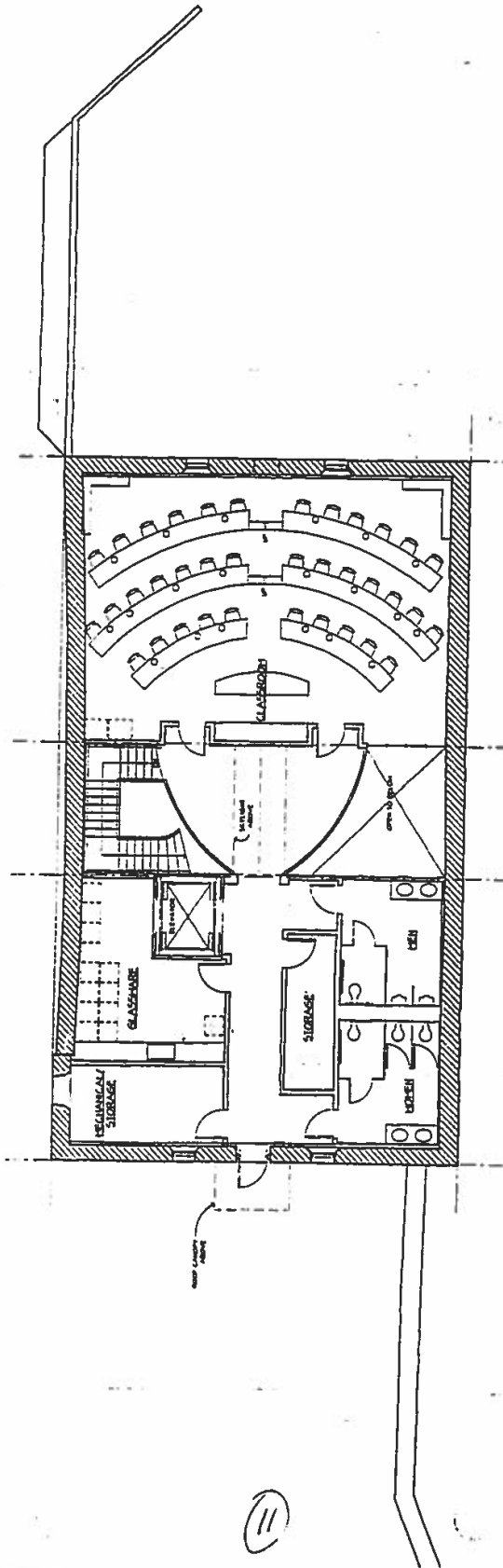
JULY 27, 2001

10/27/2001

RECEIVED

AUG 27 2001

PLANNING DEPT.  
CITY OF BERKELEY



**ARCHITECTURAL  
RESOURCES GROUP**  
Architects, Planners & Constructors, Inc.

SECOND FLOOR PLAN  
SCALE: 3/32"=1'-0"

ALTERNATE 2



**CULINARY INSTITUTE OF AMERICA**  
**STILL HOUSE REHABILITATION**  
2355 MAIN STREET  
ST. HELENA, CALIFORNIA 94574

JULY 27, 2001

Exhibit D 10/20/01

**USE PERMIT AMENDMENT and DESIGN REVIEW NO. 2003-42**

**USE PERMIT AMENDMENT AND DESIGN REVIEW  
OF THE CITY OF ST. HELENA, STATE OF CALIFORNIA,  
GRANTED TO THE CULINARY INSTITUTE OF AMERICA  
FOR THE RESTORATION AND USE OF THE GATE HOUSE**

PROPERTY OWNER: Culinary Institute of America APN: 009-131-003

Recitals

A. Mark Erickson, representative of the Culinary Institute of America, submitted an application for a Use Permit Amendment to allow the restoration and use of the Gate House building located on the campus of the Culinary Institute of America at Greystone, 2555 Main Street, St. Helena, in the W:PD:HP: Winery:Planned Development: Historic Preservation Overlay zoning district.

The use of the Greystone Building as an educational facility for the Culinary Institute of America was approved by Use Permit in 1993. Condition 10 F of Use Permit 93-105 states that the buildings identified as *the gatehouse and still house shall remain vacant and that future use shall be approved by Use Permit Amendment.*

The Culinary Institute site, primarily the Greystone Cellars and stone entry arch, was designated a California Point of Historical Interest in 1997, was listed on the National Register of Historic Places in 1977 and included in the Napa County Historic Resources Inventory in 1978. The Gate House and the Still House are listed as related features on the site and appear to have been constructed at the same time as the Greystone Cellars.

The proposed renovation of the Gate House was designed by and will be overseen by Architectural Resources Group, and will be done in accordance with the Secretary of the Interior's Standards of Rehabilitation.

The project includes a seismic retrofit of the building. The exterior river rock walls will be preserved and exterior doors, windows, eaves and soffits will be preserved. A new one story teaching kitchen will replace the existing deteriorated addition and the interior will be adapted for educational programs. Two existing windows on the rear façade of the building will be modified into doors leading to the patio and the kitchen. The new addition is 24' x 24' in size, slightly larger than the 20' x 20' addition that currently exists.

The structure will be used to study the pairing of food and wine. New accessible bathrooms will be constructed inside. The interior ceiling will be removed to provide a larger room with better light. No increase in the number of students is anticipated or requested with this project.

B. The Planning Commission of the City of St. Helena, State of California, held a noticed public hearing on August 5, 2003.

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### Findings

1. The Planning Commission hereby finds that this project is exempt from the CEQA, the California Environmental Quality Act, pursuant to Section 15331 of the Guidelines. Class 31 consists of projects limited to maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation or reconstruction of historical resources in a manner consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitation, Restoring, and Reconstructing Historic Buildings. These federal standards describe means of preserving, rehabilitation, restoring, and reconstructing historic buildings without adversely affecting their historic significance.
2. The Planning Commission makes the following Use Permit findings Section 27.439 to support the motion to approve the Use Permit:
  1. That the proposed use would not generate odors, fumes, dust, light, glare, radiation or refuse that would be injurious to surrounding uses or to the community.
  2. That the proposed use would not generate levels of noise that adversely affect the health, safety, or welfare of neighboring properties or uses.
  3. That the proposed use would not generate traffic noise in excess of the "normally acceptable" range identified in the General Plan.
  4. That the proposed use would not make excessive demands on the provision of public services including water supply, sewer capacity, energy supply, communication facilities, police protection, and fire protection.
  5. That the proposed use would provide adequate ingress and egress to and from the proposed location.
  6. That allowing the proposed use would not conflict with the City's goal of maintaining the economic viability of a local serving economy.
  7. That the proposed use would be compatible with surrounding land uses and would not conflict with the purpose established for the district within which it would be located.
  8. That the proposed use would not be in conflict with the City's General Plan.
  9. That the proposed use would not be injurious to public health, safety, or welfare.
  10. That granting the use permit would not set a precedent for the approval of similar uses whose incremental effect would be detrimental to the City or would be in conflict with the General Plan.
  11. That, as demonstrated on a detailed plan submitted by the applicant, adequate off-street parking to accommodate the long term parking needs of employees and business owners and customers is available.

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12. That the capacity of surrounding streets is adequate to serve the automobile and delivery truck traffic generated by the proposed use.

**Section 3.** The Use Permit for the above-described use is granted subject to compliance with the following conditions. Permit shall be in conformance with all City ordinances, rules, regulations and policies in effect at the time of issuance of a building permit. The conditions noted below are particularly pertinent to this permit and shall not be construed to permit violation of other laws and policies not so listed.

1. The Use Permit Amendment and Design Review shall be vested within one (1) year from the date of approval. A building permit for the use allowed under this Use Permit shall have been obtained within one (1) year from the effective date of the Use Permit or the Use Permit shall expire; provided however that the Use Permit may be extended for up to two (2) one-year periods pursuant to the St. Helena Municipal Code, Section 27.412, Extension of Permits and Approvals.
2. This permit is valid for this use only. New permits must be applied for upon any change in use. These permits will expire if the use is discontinued pursuant to then existing ordinances and regulations.
3. The Use Permit Amendment and Design Review shall not become effective until fourteen (14) calendar days after approval, providing that the action is not appealed by the City Council or any other interested party within that 14 day period.
4. Any request for an extension of the Use Permit Amendment and Design Review must be justified in writing and received by the Planning Department at least thirty (30) days prior to expiration.
5. Compliance with all permit conditions shall occur in accordance with specific regulations but in all cases no later than prior to occupancy or initiation of use unless another time is set by law or by this approval. Occupancy or final inspection of a project may be withheld if all conditions, including payment of fees for services rendered by the City, are not met.
6. The applicant will defend and indemnify and hold the City, its agents, officers, and employees harmless of any claim, action or proceedings to attack, set aside, void or annul an approval so long as the City promptly notifies the applicant of any such claim, action, or proceedings and the City cooperates fully in the defense of the action or proceedings.
7. Provided they are in general compliance with the Use Permit, minor modifications may be approved by the Planning Director.
8. This Use Permit Amendment and Design Review shall run with the land and shall be binding upon all parties having any right, title or interest in the real property or any part thereof, their heirs, successors and assigns, and shall inure to their benefit and benefit of the City of St. Helena.

9. The primary purpose of this review is for compliance with the General Plan and Zoning Ordinance. The owner/applicant is responsible for meeting with the Building Official / Fire Inspector to review compliance with Building and Fire Codes, including fire protection systems and the accessibility standards of Title 24.

10. All required fees, including planning fees, development impact fees, building fees, toilet retrofit fees, and St. Helena Unified School District fees shall be paid prior to issuance of building permit. Pursuant to City Council Resolution 2003-65, the owner and applicant are informed of the following:

*In recognition of the need for additional affordable housing, and to mitigate the effects of this development on the supply and demand of affordable housing, the permittee shall be subject to a Housing Impact Fee, an inclusionary requirement, an in-lieu fee, and/or similar fair and appropriate mechanisms, to provide funds for or to develop additional affordable housing, should such mechanisms be established by the City.*

11. The use of the property by the Culinary Institute of America was approved in 1993 as authorized by Use Permit 93-105. This Use Permit Amendment complies with Condition 10 F of Use Permit 93-105 which states that the buildings identified as *the gate house and still house shall remain vacant and that future use shall be approved by Use Permit Amendment*. No other conditions of approval of Use Permit 93-105 are modified by this permit.

12. Construction shall be in compliance with plans marked Exhibits A- D, dated 8/05/03.

13. Prior to issuance of building permits, the existing interior of the structure shall be recorded through preparation of a floor plan noting uses of rooms and building materials, and with photographs. The purpose of this is to supplement the historic record of the building and site.

14. Building permits that allow new or replacement plumbing for the Gate House shall not be issued until the following conditions have been met:

- a. The Use Permit Modification requested by the Markham Vineyards Combined Wastewater Management System has received approval from the County of Napa.
- b. The applicant has submitted a plan and time schedule to reduce municipal water use to 12,500 gallons per day and such plan has been reviewed and approved by the City Engineer. Such a plan may include provision of another source of water, such as a well or may include a request for an increase in water allotment from the City of St. Helena.

The intent of this condition is to allow permits to be issued that will allow the seismic retrofit of the building to commence.

15. A survey for hazardous materials shall be conducted prior to demolition activities for analysis of asbestos containing materials and lead based paint.

16. To preserve air quality, the following practices shall be observed during construction:

- 1. Water all active construction areas at least twice daily.
- 2. Cover all trucks hauling soil, sand, and other loose materials.

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3. Apply water three times daily to all unpaved access roads, parking area, and staging areas at the construction site.
  4. Sweep adjacent public streets daily with water sweepers if visible soil material is carried onto streets.
17. A tree protection plan shall be submitted prior to issuance of building permits. The tree protection plan shall consider the following measures:
- a. Each tree or group of trees to be preserved shall be protected by enclosure with a six (6) foot fence prior to grading or movement of heavy equipment. The minimum distance of the fence from the tree shall be at the drip line, but may be extended an additional 10' to include the root zone which shall be determined by the project arborist or city arborist. Fencing shall remain in place until such time as the Building Official is assured the trees are no longer in danger of construction damage.
  - b. Landscaping under the protected tree shall be discouraged, but if landscaping is planted under the drip line of an existing native or protected tree, the landscaping shall be drought tolerant or California native plant materials. Landscaping shall not be planted within (six) 6 feet of the trunk. Shredded bark mulch is encouraged in this area. No lawns shall be planted within the drip line.
  - c. The following activities are prohibited under the drip line of the protected trees unless authorized by the Planning Director under the advice of the City arborist or project arborist:
    1. Change in the amount of irrigation provided to the protected from that which was provided prior to the commencement of construction activity.
    2. Trench, grade or pave into the drip line of a protected tree.
    3. Change the grade elevation by more than 6" within the drip line of the tree and for a distance of 30' outward from the drip line of the tree.
    4. Park or operate any motor vehicle within the drip line area of a protected tree, except within designated parking areas.
    5. Place or store any equipment or construction materials within the drip line area of the tree.
    6. Attach any signs, ropes, cables or any other items to the tree.
    7. Cut or trim any branch of the tree for temporary construction purposes.
    8. Place or allow flowing into or over the root zone area of any tree any oil, fuel, concrete mix, paint, solvent, plaster or other deleterious substance.
18. To reduce disturbance of residents in the project vicinity, construction activities which generate noise that can be heard at the property line of any parcel of real property within the City limits shall be limited to 8:00 a.m. to 5:00 p.m. Monday through Saturday. Delivery of materials/equipment and cleaning and servicing of machines/equipment shall be limited to 7:00 a.m. to 6:00 p.m. Exceptions to these time restrictions may be granted by the Public Works Director for one of the following reasons: (1) inclement weather

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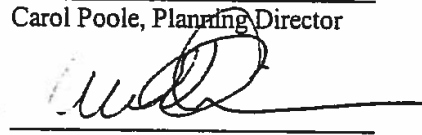
affecting work, (2) emergency work, or (3) other work, if work and equipment will not create noise that may be unreasonably offensive to neighbors as to constitute a nuisance. The City Engineer must be notified and give approval in advance of such work. No construction activities shall occur on Sundays or federal or local holidays that generate noise that can be heard at the property line of any parcel of real property within the City limits.

19. Property owners within this district shall recognize that there exist right-to-farm properties within the district and in the vicinity of the district. There is a good faith expectation that no complaints will occur regarding legal, normal agricultural activities on the adjacent land. Such activities may include day or night disbursement of chemicals, and creation of dust, noise, or fumes.

**I HEREBY CERTIFY** that the foregoing Use Permit and Design Review was duly and regularly approved by the Planning Commission of the City of St. Helena at a regular meeting of said Planning Commission held on August 5, 2003 by the following roll call vote:

**AYES:** Commissioners Philippakis, Chairman York  
**NOES:** None  
**ABSTAIN:** Commissioner Katz  
**ABSENT:** Marty Oldford

  
 Carol Poole, Planning Director

  
 Mark Erickson  
 Managing Director

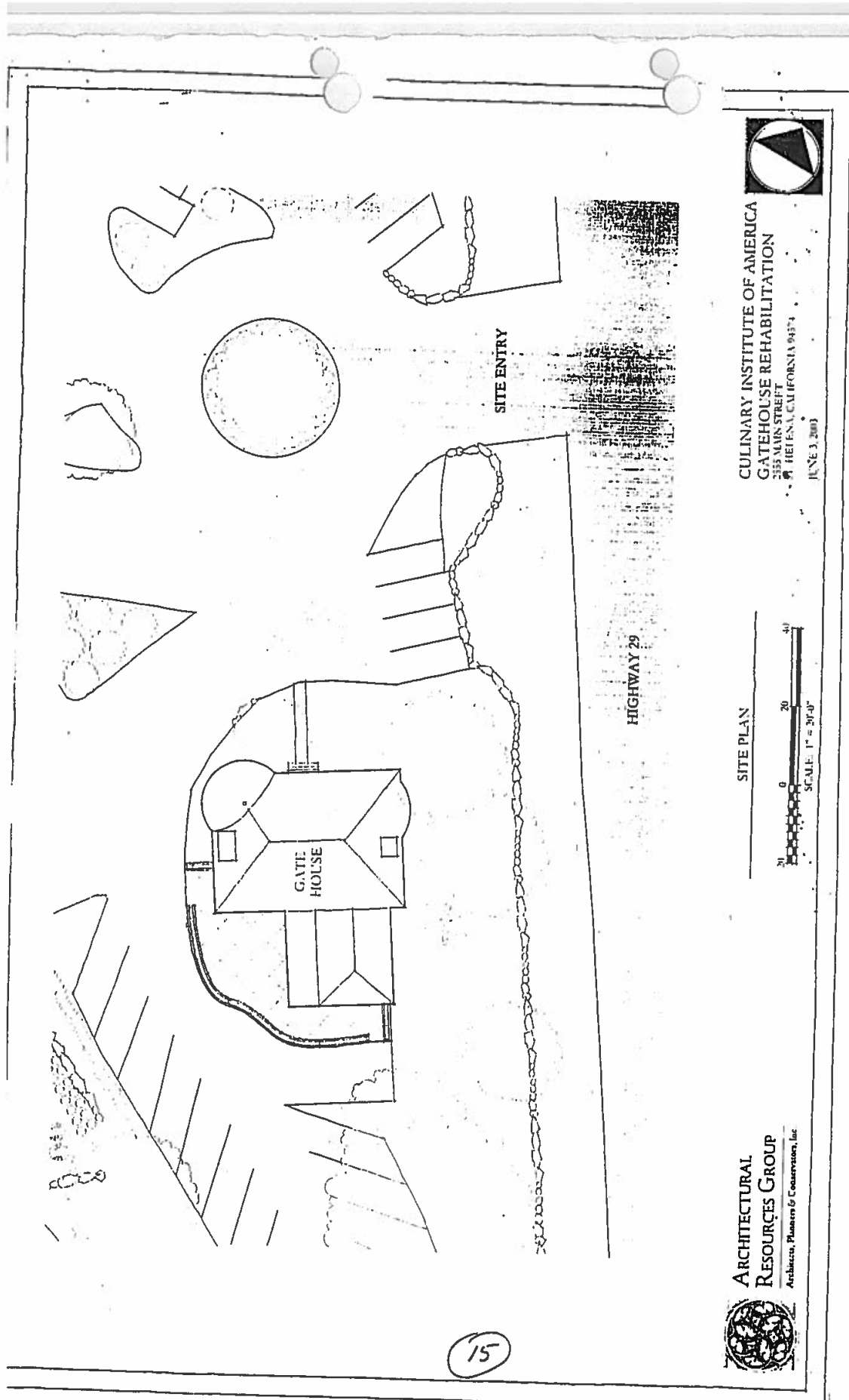
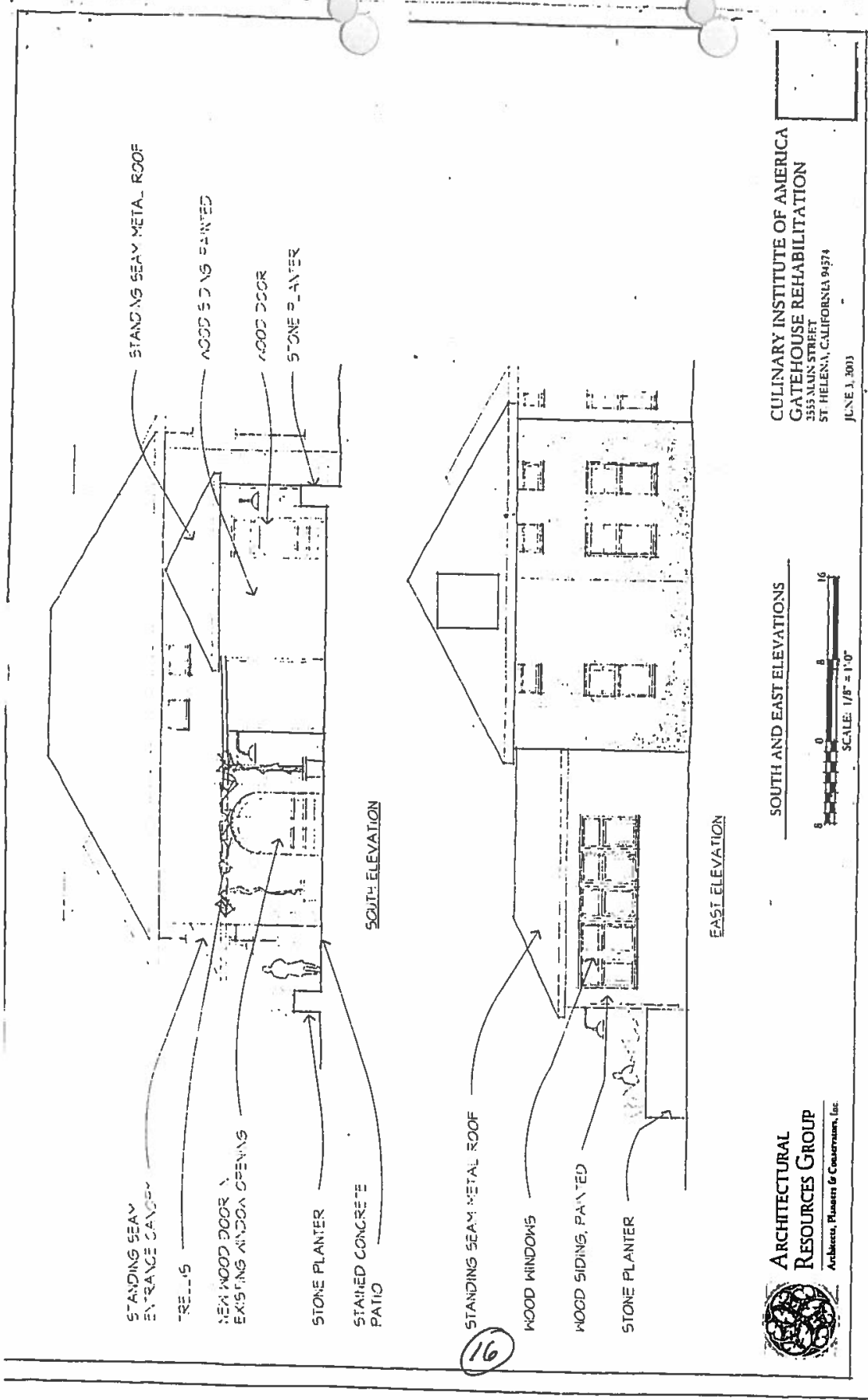


Exhibit A 8/5/03

**RECEIVED**

JUN 18 2003

PLANNING DEPT.  
CITY OF ST. JEROME



RECEIVED

JUN 18 2003

PLANNING DEPT.  
 CITY OF ST. HELENA

Exhibit B 8/5/03

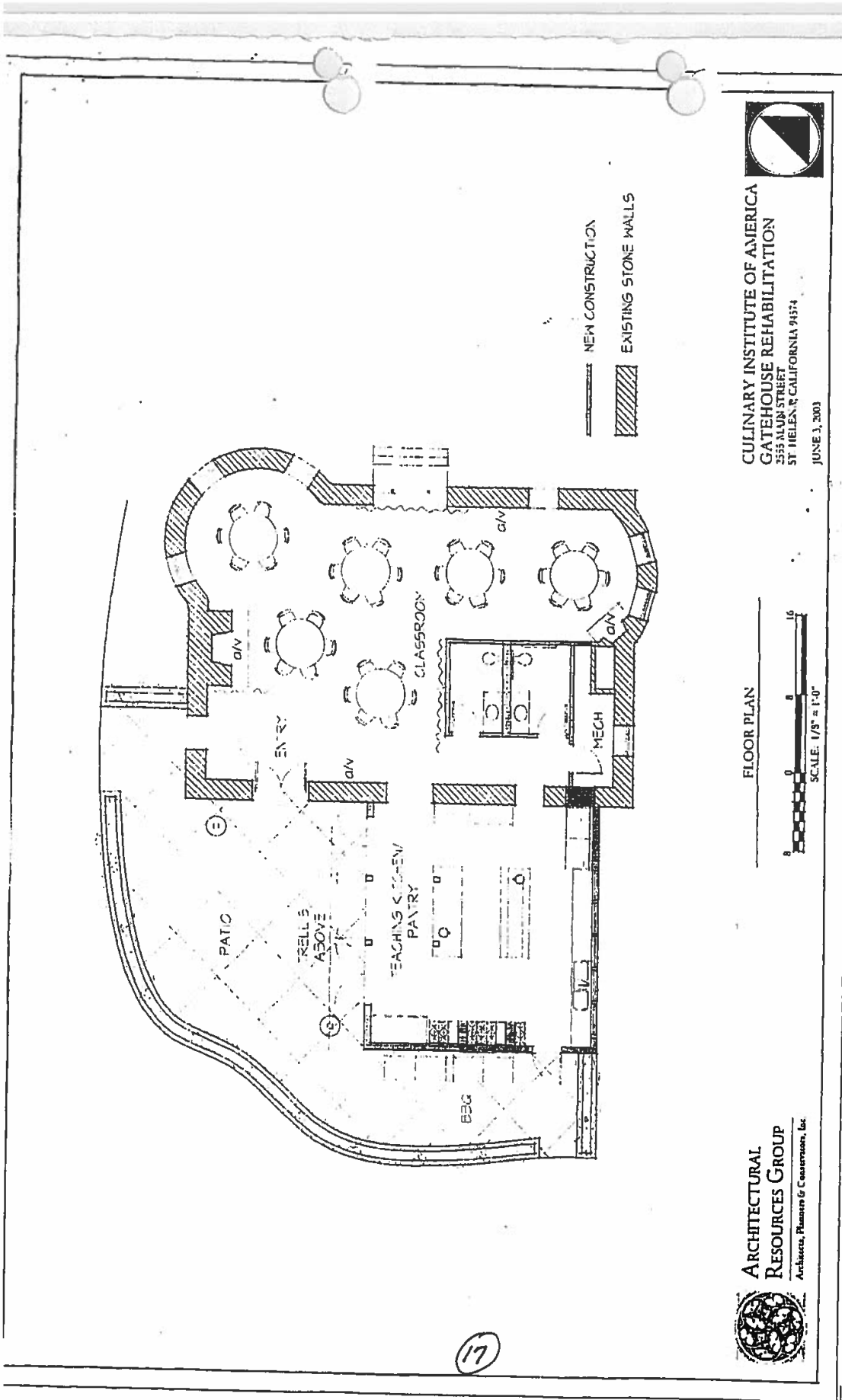
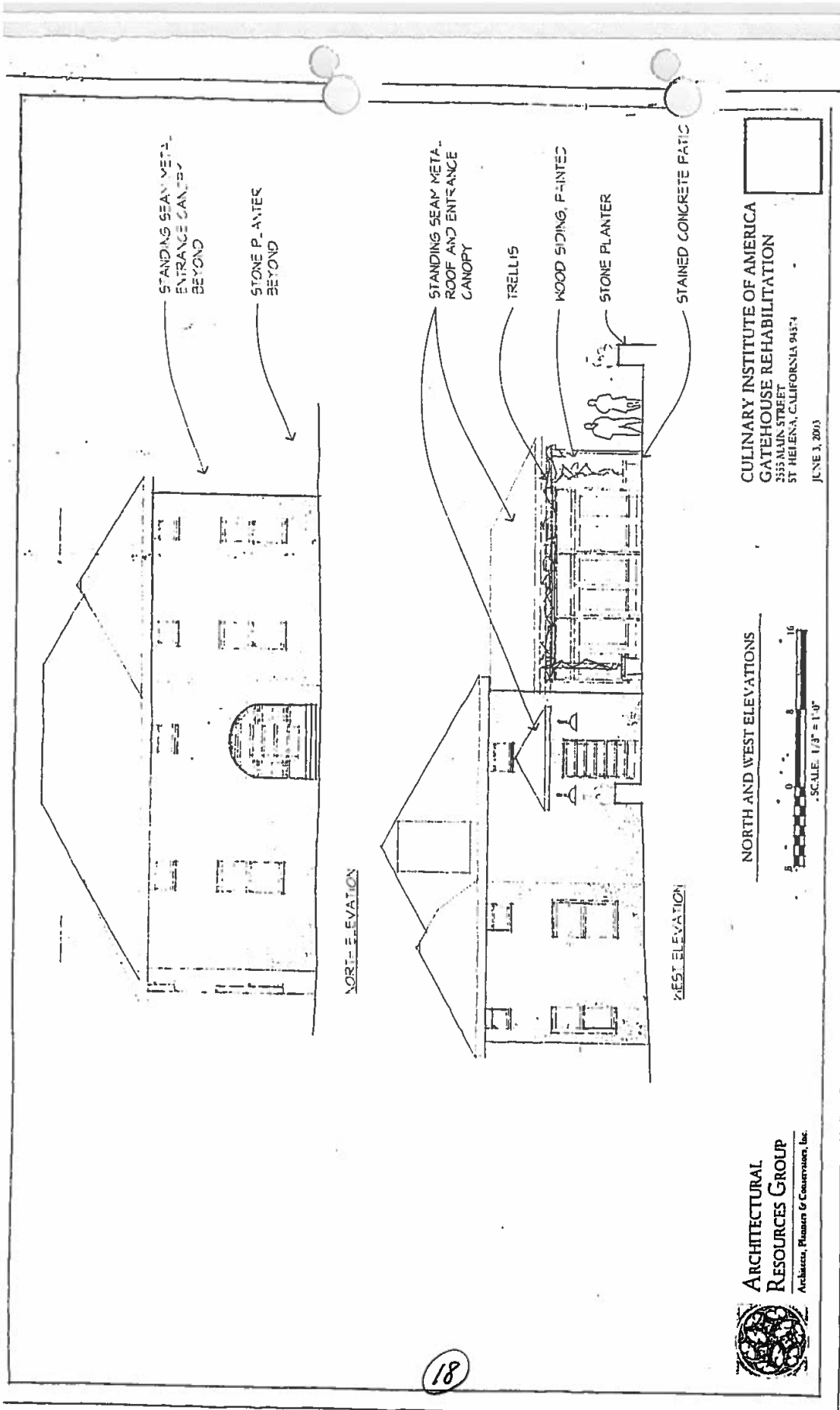


Exhibit C 8/5/03

**RECEIVED**

JUN 18 2003

PLANNING DEPT.  
CITY OF ST. HELEN



RECEIVED

JUN 18 2003

PLANNING DEPT.  
CITY OF ST. HELENA

Exhibit D 8/5/03

**CITY OF ST. HELENA**

**RESOLUTION 2004 - 112**

**APPROVING A USE PERMIT AMENDMENT  
AND WATER AGREEMENT TO INCREASE  
THE WATER USE LIMITATION FOR  
THE CULINARY INSTITUTE OF AMERICA  
AT 2555 MAIN STREET**

**RECITALS**

- A. Mark Erickson, representative of the Culinary Institute of America (CIA) submitted an application for a use permit amendment to condition 13A of Resolution 93-105, granting a use permit to the Culinary Institute of America. Condition 13A states:

*Domestic water will be supplied by the City. Water use shall be limited to an average of 12,500 gpd. No City water shall be used for irrigation. Off-site well water shall be used for landscaping; reclaimed wastewater shall be used for agricultural irrigation.*

- B. Use Permit Amendment 2003-42 authorizing the renovation and use of the Gate House for CIA programs required that the applicants submit a plan to show compliance with the 1993 water use limitation. The applicants showed evidence of on-going leak detection and water conservation measures, and an audit of all water fixtures located on the property.
- C. The CIA has requested an amendment to the use permit and to the year 2000 water use agreement to allow municipal water use of 17,500 gpd, an increase of 5,000 gpd. The amount of water requested is anticipated to cover all foreseen expansion of uses at Greystone including the food and wine programs at the renovated Still House and Gate House.
- D. Approval of the amendment to the use permit necessitates an amendment to a water use agreement executed between the City of St. Helena and the CIA in May 2000.
- E. The Planning Commission of the City of St. Helena, State of California, held a noticed public hearing on August 17, 2004 and recommended approval to the City Council.

**RESOLUTION**

NOW, THEREFORE, the City Council of the City of St. Helena resolves as follows:

1. The City Council finds that with a condition of approval to require an alternative equivalent to 80 retrofits, the proposed project is in compliance with the certified 1993 Final Environmental Impact Report and the adopted Mitigation Monitoring Program and Statement of Overriding Considerations for the Culinary Institute of America (Resolution 93-103).

2. Pursuant to Municipal Code section 17.168.050, the City Council makes the following findings for approval of an amendment to a use permit:

- a. That the proposed use would not generate odors, fumes, dust, light, glare, radiation or refuse that would be injurious to surrounding uses or to the community.
- b. That the proposed use would not generate levels of noise that adversely affect the health, safety, or welfare of neighboring properties or uses.
- c. That the proposed use would not generate traffic noise in excess of the "normally acceptable" range identified in the General Plan.
- d. That the proposed use would not make excessive demands on the provision of public services including water supply, sewer capacity, energy supply, communication facilities, police protection, and fire protection.
- e. That the proposed use would provide adequate ingress and egress to and from the proposed location.
- f. That allowing the proposed use would not conflict with the City's goal of maintaining the economic viability of a local serving economy.
- g. That the proposed use would be compatible with surrounding land uses and would not conflict with the purpose established for the district within which it would be located.
- h. That the proposed use would not be in conflict with the City's General Plan.
- i. That the proposed use would not be injurious to public health, safety, or welfare.
- j. That granting the use permit would not set a precedent for the approval of similar uses whose incremental effect would be detrimental to the City or would be in conflict with the General Plan.
- k. That, as demonstrated on a detailed plan submitted by the applicant, adequate off-street parking to accommodate the long term parking needs of employees and business owners and customers is available.
- l. That the capacity of surrounding streets is adequate to serve the automobile and delivery truck traffic generated by the proposed use.

3. The Use Permit Amendment for the above described use is granted subject to compliance with the following conditions. The conditions noted below are particularly pertinent to this permit and shall not be construed to permit violation of other laws and policies not so listed.
4. The applicant will defend and indemnify and hold the City, its agents, officers, and employees harmless of any claim, action or proceedings to attack, set aside, void or annul an approval so long as the City promptly notifies the applicant of any such claim, action, or proceedings and the City cooperates fully in the defense of the action or proceedings.
5. This permit shall run with the land and shall be binding upon all parties having any right, title or interest in the real property or any part thereof, their heirs, successors and assigns, and shall inure to their benefit and benefit of the City of St. Helena.
6. This permit modifies condition 13A of Resolution 93-105 as follows:

*Domestic water will be supplied by the City of St. Helena. Water use shall be limited to an average of 17,500 gpd as reflected in a water use agreement limiting annual water use to 19.6 acre feet (8,545 billing units) per year. Well water or reclaimed wastewater shall be utilized for landscape and agricultural irrigation.*



7. The authorization of this amendment modifies the condition of approval in Use Permit 2003-42 requesting proof of compliance with the 1993 water use limitation.
8. This project is subject to the City's water use efficiency program. The requested 5,000 gallons of water per day increase may be offset by a credit of 3,100 gallons per day for the reduction in water use at the Culinary Institute of America's Marlinda dormitory facility located at 830 Pratt Avenue. The remaining 1,900 gallons per day or 2.12 acre feet per year increase shall be mitigated by a combination of the payment of in-lieu fees, water savings achieved through 30 retrofits, or by an equivalent alternative innovative method of mitigation of water use to be approved by the Public Works Director.
9. The site shall utilize tertiary water for irrigation when it becomes available.

Approved at a Regular Meeting of the St. Helena City Council on October 12, 2004, by the following vote:

AYES: Councilmembers Potter, Savidge, Sklar, Mayor Slavens

NOES: None

ABSENT: Councilmember Schoch

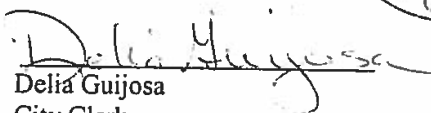
ABSTAIN: None

APPROVED:



Ken Slavens  
Mayor

ATTEST:



Delia Guijosa  
City Clerk





2004-0045188

EXEMPT FROM RECORDING FEES PURSUANT  
TO GOVERNMENT CODE SECTION 6103

Recorded  
Official Records  
County Of  
NAPA  
JOHN TUTEUR  
Recorder

REC FEE .00

RECORDING REQUESTED BY AND  
WHEN RECORDED MAIL TO:

10:09AM 29-Oct-2004

CW  
Page 1 of 10

City Clerk  
City of St. Helena  
1480 Main Street  
St. Helena, California 94574

Assessor's Parcel No. 009-131-003

## AGREEMENT

### CULINARY INSTITUTE OF AMERICA

THIS AGREEMENT, entered into on October 8, 2004, between the City of St. Helena, a municipal corporation (City), and the Culinary Institute of America at Greystone (Customer), provides as follows:

#### RECITALS

- A. Customer is the owner of real property (the Property) located at 2555 Main Street, St. Helena, Napa County, known as Assessor's Parcel No. 009-131-003, as more particularly described in Exhibit A attached hereto.
- B. On October 12, 2004, the St. Helena City Council approved Resolution 2004-112, which authorized an amendment to Resolution 93-105 and an amendment to the year 2000 water use agreement to allow an increase of water use by the Customer.
- C. The parties hereto wish to enter into this Water Agreement to fulfill the Resolution condition of approval requiring such an agreement.

NOW THEREFORE, in consideration of the mutual covenants contained herein, the parties agree as follows:

### AGREEMENT

1. City is obligated to provide water to the Property up to no more than an annual limitation (Annual Limitation) of 19.6 acre feet (8,545 hundred cubic feet/billing units) per Water Year upon the terms and conditions set forth herein. As used herein, the term Water Year shall mean the twelve-month period between the City's last water meter reading of a calendar year and the last water meter reading of the following calendar year.

2. City water shall be used only for those uses as authorized by the Resolution. City shall not be obligated to provide water service for any other use nor for any further expansion of the uses allowed by the Resolution.

4. While water is furnished to Customer pursuant to this Agreement, Customer shall be bound by and subject to all lawful resolutions, rules, regulations, directives, ordinances and orders of the City pertaining to water services as may be enacted from time to time for all other applicable users of City water, including, without limitation, provisions relating to rate charges and water shortage emergencies.

5. Customer shall monitor its water usage on a bimonthly basis and employ all measures necessary to ensure that the Annual Limitation is not exceeded. In the event the City Director of Public Works reasonably determines that the Annual Limitation inevitably will be exceeded or that the Annual Limitation has been exceeded, City may require Customer to undertake reasonable additional conservation measures and may require Customer, upon ten (10) days prior written notice, to terminate water service for nonessential uses. For purposes of this Agreement, the term "nonessential uses" shall mean uses for which non-potable water would suffice.

6. In the event Customer exceeds its Annual Limitation, it shall pay to City a penalty surcharge equal to 60% of the water rate charge for each hundred cubic feet, or portion thereof, used in excess of the Annual Limitation. Such penalty surcharge shall be due and payable within 30 days after calculation and demand by City. In addition to the 60% surcharge, City may avail itself of all rights and remedies set forth in Paragraph 8 of this Agreement.

7. In addition to any other rights or remedies, either party may institute legal action to cure, correct or remedy any default of this Agreement; to enforce any covenants or agreements herein or to enjoin any threatened or attempted violation thereof; to recover damages for any default; or to obtain any other remedy consistent with the purpose of this Agreement.

8. This Agreement shall be construed and enforced in accordance with the laws of the State of California. Should any legal action be brought by either party because of breach of this Agreement or to enforce any provision of this Agreement, the prevailing party in such action shall be entitled to all reasonable attorney's fees, court costs and necessary disbursements in connection with such action.

9. The parties hereto agree that the provisions of this Agreement are severable. If any provision of this Agreement is held invalid, the remainder of this Agreement shall not be affected and shall remain in full force and effect unless amended or modified by mutual consent of the parties in writing.

10. The provisions of this Agreement shall be binding on all tenants, heirs, assigns and successors in interest to the parties hereto and shall be a covenant that runs with the land.

Executed the day and year first above written.

///  
///  
///

CUSTOMER: Culinary Institute of America at Greystone

Dated: October 8, 2004

By: Charles A. O'Mara  
Charles A. O'Mara,  
Sr. Vice President for Finance & Administration

CITY:

CITY OF ST. HELENA,  
a municipal corporation,

Dated: 10-13-04

By: Bert Johansson  
Bert Johansson  
Its: City Manager

ATTEST:

Della Guijosa  
Della Guijosa, City Clerk

APPROVED AS TO FORM:

*Diane M. Price* 10/13/04  
Diane M. Price, City Attorney



STATE OF NEW YORK                    )  
                                                  ) ss.  
COUNTY OF DUTCHESS                )

On October 8, 2004, before me, Carol Dipper, a Notary Public in and for the State of New York, personally appeared Charles A. O'Mara personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

SEAL AFFIXED

  
Notary's Signature

CAROL DIPPER  
Notary Public, State of New York  
No. 01DI4611174  
Qualified in Columbia County  
Commission Expires June 30, 2007

STATE OF CALIFORNIA                )  
                                                  ) ss.  
COUNTY OF \_\_\_\_\_ )

On \_\_\_\_\_, before me, \_\_\_\_\_, a  
Notary Public in and for the State of California, personally appeared \_\_\_\_\_  
\_\_\_\_\_ personally known to me (or proved to me on the basis of satisfactory evidence) to be  
the person whose name is subscribed to the within instrument and acknowledged to me that he  
executed the same in his authorized capacity, and that by his signature on the instrument the person,  
or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

\_\_\_\_\_  
Notary's Signature

STATE OF CALIFORNIA )  
 ) ss.  
 COUNTY OF NAPA )

On October 13, 2004, before me, the undersigned, City Clerk of the City of St. Helena, personally appeared Bert Johansson, personally known to me to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Signature:

Delia Guijosa  
 Delia Guijosa, City Clerk



**USE PERMIT AMENDMENT NO. 2006-07**

**USE PERMIT AMENDMENT OF THE CITY OF ST. HELENA  
STATE OF CALIFORNIA, GRANTED TO  
CULINARY INSTITUTE OF AMERICA  
2555 MAIN STREET**

PROPERTY OWNER: Culinary Institute of America

APN: 009-131-003

Recitals

1. The Culinary Institute of America (CIA) requested amendments to three conditions of approval that pertain to the operation of the school. These amendments will enable the school to offer classes for an Associates degree. The first amendment proposed would expand the level of student skill to include entry level classes in addition to the continuing education classes for professionals. The second amendment requested is to modify the language pertaining to the average length of stay at the school and the third modification is to change the condition of approval pertaining to housing/student ratio and recognize the provisions of on-site and off-site dormitories.

2. The Planning Commission of the City of St. Helena, State of California, held a noticed public hearing on March 21, 2006.

Resolution

The Planning Commission of the City of St. Helena, State of California, approved the Use Permit Amendment on the following basis:

A. The Planning Commission hereby finds that this project is exempt from the California Environmental Quality Act pursuant to Section 15301, Class 1 which exempts operation and minor expansion of use at existing structures.

B. The Planning Commission makes the following Use Permit Amendment findings, Section 17.168.050, to support the motion to approve the Use Permit Amendment:

1. That the proposed use would not generate odors, fumes, dust, light, glare, radiation or refuse that would be injurious to surrounding uses or to the community.
2. That the proposed use would not generate levels of noise that adversely affect the health, safety, or welfare of neighboring properties or uses.
3. That the proposed use would not generate traffic noise in excess of the "normally acceptable" range identified in the General Plan.
4. That the proposed use would not make excessive demands on the provision of public services including water supply, sewer capacity, energy supply, communication facilities, police protection, and fire protection.



5. That the proposed use would provide adequate ingress and egress to and from the proposed location.
6. That allowing the proposed use would not conflict with the City's goal of maintaining the economic viability of a local serving economy.
7. That the proposed use would be compatible with surrounding land uses and would not conflict with the purpose established for the district within which it would be located.
8. That the proposed use would not be in conflict with the City's General Plan.
9. That the proposed use would not be injurious to public health, safety, or welfare.
10. That granting the use permit would not set a precedent for the approval of similar uses whose incremental effect would be detrimental to the City or would be in conflict with the General Plan.
11. That, as demonstrated on a detailed plan submitted by the applicant, adequate off-street parking to accommodate the long term parking needs of employees and business owners and customers is available.
12. That the capacity of surrounding streets is adequate to serve the automobile and delivery truck traffic generated by the proposed use.

C. The Use Permit Amendment for the above described use is granted subject to compliance with the following conditions. Permit shall be in conformance with all City ordinances, rules, regulations and policies in effect at the time of issuance of a building permit. The conditions noted below are particularly pertinent to this permit and shall not be construed to permit violation of other laws and policies not so listed.

1. The Use Permit Amendment shall be vested within one (1) year from the date of approval or it shall expire; provided however that the Use Permit may be extended for up to two (2) one-year periods pursuant to the St. Helena Municipal Code, Section 17.08.130, Extension of Permits and Approvals.
2. The Use Permit Amendment shall not become effective until fourteen (14) calendar days after approval, providing that the action is not appealed by the City Council or any other interested party within that 14 day period.
3. Any request for an extension of the Use Permit Amendment must be justified in writing and received by the Planning Department at least thirty (30) days prior to expiration.
4. The applicant will defend and indemnify and hold the City, its agents, officers, and employees harmless of any claim, action or proceedings to attack, set aside, void or annul an approval so long as the City promptly notifies the applicant of any such claim, action, or proceedings and the City cooperates fully in the defense of the action or proceedings.
5. Provided they are in general compliance with the Use Permit Amendment, minor modification may be approved by the Planning Director.
6. This Use Permit Amendment shall run with the land and shall be binding upon all parties having any right, title or interest in the real property or any part thereof, their heirs, successors and assigns, and shall inure to their benefit and benefit of the City of St. Helena.
7. **Condition 10A** of Resolution 93-105 shall be amended as follows:

*The educational program at the facility shall have as its primary focus the delivery of advanced professional education for current professionals in the hospitality, food or beverage industries or students enrolled in a course of study leading to a professional career in these fields. The maximum student population shall not exceed 104 students.*

8. Condition 10 B of Resolution 93-105 shall be amended as follows:

*Only staff and students participating in educational programs enrolled at the campus shall be allowed to use school accommodations. The length of stay shall not exceed the number of days of instruction and the average length of stay shall equal or exceed two weeks per student.*

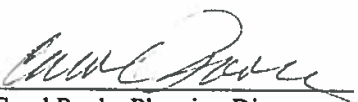
*All occupants of the housing provided onsite or at the CIA's dormitory on Pratt Avenue shall be treated as transient occupants regardless of length of stay. Transient occupancy tax shall be paid for any students occupying these facilities, even if their length of stay exceed thirty (30) days.*

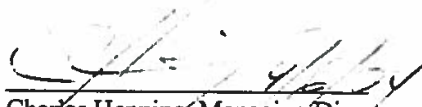
9. Condition 12 F of Resolution 93-105 shall be amended as follows:

*Maximum enrollment allowed by this permit shall not exceed 104 students. The project has provided thirty-six (36) housing spaces in the Guest House on the Greystone Property and an additional forty (40) spaces in the dormitory commonly known as "Vineyard Lodge" located on Pratt Avenue. This combined number of units satisfies current requirements for housing for the CIA program and , in the event of any further expansion of the capacity of the CIA, the City of St. Helena shall decide whether additional housing units will need to be provided by the CIA, and the number of such additional units, if any.*

**I HEREBY CERTIFY** that the foregoing Use Permit Amendment was duly and regularly approved by the Planning Commission of the City of St. Helena at a regular meeting of said Planning Commission held on March 21, 2006 by the following roll call vote:

|                 |                                                    |
|-----------------|----------------------------------------------------|
| <b>AYES:</b>    | Commissioners Shott, Oldford, Chairman Philippakis |
| <b>NOES:</b>    | None                                               |
| <b>ABSENT:</b>  | Commissioner McCrea                                |
| <b>ABSTAIN:</b> | Commissioner Katz                                  |

  
Carol Poole, Planning Director

  
Charles Henning, Managing Director  
Culinary Institute of America

**CITY OF ST. HELENA**

**RESOLUTION NO. 2006-130**

**APPROVING A USE PERMIT AMENDMENT, DESIGN REVIEW VARIANCE AND LOT LINE ADJUSTMENT FOR THE CARPY PROPERTY PORTION OF THE CULINARY INSTITUTE OF AMERICA, LOCATED AT 2401 MAIN STREET**

PROPERTY OWNER: Culinary Institute of America

APN: 009-131-028

**Recitals**

1. The applicant and property owner, the Culinary Institute of America, requests approval to grade a portion of the Carpy property, located immediately south of the Greystone property in order to construct a parking lot to accommodate approximately 85 vehicle for use of Culinary Institute guests and visitors, install of lighting in the proposed parking lot, use the existing Carpy house for guests of the Culinary Institute, remove existing asphalt from the site, relocate an existing driveway to the Carpy house, remove and replant trees and delete a previous approval for on-site dormitory space on the property.
2. The applicant's proposal requires the following actions or entitlements: a) a General Plan Amendment to extend the Urban Limit Line to the south to encompass the Carpy property; b) rezoning of the Carpy property from the A-20: Twenty-acre Agriculture district to the W:PD:HP, Winery:Planned Development Overlay:Historic Preservation Overlay districts to allow the proposed improvements; c) a Use Permit Amendment and Design Review to allow overnight lodging at the Carpy house, to delete the previously approved on-site dormitory space, to remove existing driveways on the site and relocate the existing driveway to the Carpy house, and to construct a parking lot; d) a variance to allow a portion of the relocated on-site access drive to the Carpy house to exceed the maximum roadway gradient of 16% for approximately 110 to 120 feet of the driveway that would have a grade of 18%; and e) a Lot Line Adjustment to increase the size of the Greystone property from 13.41 acres to 14.7 acres and to decrease the size of the Carpy property from 5.49 acres to 4.19 acres.
3. The applicant's proposal is subject to review of the California Environmental Quality Act (CEQA). An Initial Study was prepared on the proposed project and an Environmental Checklist was utilized to focus the Initial Study on the environmental factors that may be impacted or further impacted by implementation of the proposed project.
4. The Planning Commission of the City of St. Helena, State of California, held noticed public hearings on the applicant's proposal on August 15, 2006, reviewing the public record, including all application submittal materials, letters submitted regarding the proposal and staff reports, opening a public hearing to receive testimony from the applicant and interested persons, and deliberating on the project before making its recommendation to the City Council to approve the project with the recommended conditions and mitigation measures.

5. The City Council held a noticed public hearing to consider the Mitigated Negative Declaration on September 12, 2006.

Resolution

NOW, THEREFORE, the City Council for the City of St. Helena resolves as follows:

- A. The City Council determined that the project is subject to CEQA and adopted a Mitigated Negative Declaration, including the recommended mitigation measures attached to the Initial Study and Mitigation Monitoring and Reporting Program (MMRP). The Mitigated Negative Declaration prepared for this project and circulated in compliance with the requirements of CEQA established that although the proposed project could have a significant effect on the environment, there would not be a significant effect in this case because revisions to the project in the form of mitigation measures have been adopted;
- B. The City Council makes the following Use Permit findings, contained in Zoning Ordinance Section 27.439, to support the motion to approve a Use Permit Amendment to allow the proposed improvements on the subject parcel:
  - 1. That the proposed use would include construction of a parking lot and the operation of this use would not generate odors, fumes, radiation or refuse. Since the parking lot would include lighting, adherence to Mitigation Measure 1 contained in the Initial Study/Mitigated Negative Declaration would reduce light and glare impacts to a less-than-significant level on adjacent roads and surrounding properties by requiring approval of photometric plans for parking lot lighting to ensure that there will be no spillover of light and glare.
  - 2. That the proposed use could result in significant although short-term levels of noise that would be noticed by surrounding properties to the west and south. With adherence to Mitigation Measure 10 contained in the Initial Study/Mitigated Negative Declaration, short term construction noise impacts would be limited so that the project would not result in excessive noise that would adversely affect the health, safety or welfare of surrounding properties or uses.
  - 3. That, based on the traffic analysis prepared for the proposed project, there would be limited additional traffic trips generated to the proposed parking lot. There would therefore be limited additional traffic noise that would not exceed noise thresholds established in the General Plan.
  - 4. That the proposed parking lot landscaping would not use City water but would rely on a private water source for an irrigation source. Wastewater generated from the Carpy house would be treated on site and disposed of in off-site ponds on the east side of Main Street. Use of other City services would be minimal so that the project would not make excessive demands on City water wastewater, police, fire or other sources.
  - 5. That the proposed parking lot would continue to use the existing driveway on Main Street. The traffic analysis did not identify a significant safety issue with ingress and egress.
  - 6. That the proposed use would allow for the continued use of the CIA as a revenue generating use in the City and would not conflict with goals of maintaining the viability of the local economy.

7. That the proposed parking lot would represent a logical continuation of the Greystone parking lot immediately north of the project site, which contains a winery. Therefore, there would be no land use compatibility issues and the proposed use would be consistent with the intent of the W: Winery zoning district as identified above in the staff report.
  8. That, based on the analysis included in the staff report above, the proposed project is consistent with the A: Agriculture General Plan land use designation that allows for single family dwellings, wineries and similar uses. The proposed use includes continued use of the Carpy single-family house and expansion of the parking lot for the Culinary Institute of America, which is a winery related land use.
  9. That the proposed parking lot use would operate in a manner consistent with the requirements of the St. Helena Municipal Code that would ensure that the public health, safety and welfare would be protected at all times. The construction of the proposed parking lot would also be subject to mitigation measures set forth in the Initial Study/Mitigated Negative Declaration, which would provide additional health, safety and welfare protection to the public.
  10. That Approval of the requested use would not set a precedent for future similar projects since separate use permit approvals will be required for this type of use and the Culinary Institute is a unique land use in St. Helena.
  11. That the objective of the project is to provide approximately 85 additional off-street parking for the existing Culinary Institute facility so that more parking would be provided for employees and visitors to the facility.
  12. That the traffic analysis prepared by the Crane Transportation Group indicates that minimal additional trips would be added to Main Street as a result of project approval. Therefore, the proposed project would be consistent with this finding.
- C. The City Council approves the Design Review for construction of the Carpy property parking lot, relocated on-site driveway and landscaping, subject to the applicable Design Criteria contained in Zoning Ordinance Section 17.164.030. The improvements have been designed to fit into the context of the existing Culinary Institute of America landscaping and related facilities.
- D. The City Council makes the following Variance findings, contained in Zoning Ordinance Section 27.449, to support the motion to approve a Variance to allow construction of a relocated on-site driveway to the Carpy house with a gradient of 18% that exceeds the maximum 16% grade for a run of approximately 110 to 120 linear feet.
1. That a hardship peculiar to the property, not created by any act of the owner, exists in that the need for the variance is caused by the relatively steep topography on the westerly side of the Carpy property. In order to achieve on-site access from the lower elevation of the site to the higher elevation Carpy house without going beyond the boundary of the site a portion of the roadway would need to exceed the 16% grade for approximately 110 to 120 feet of the roadway.
  2. That the variance is necessary for the preservation and enjoyment of substantial property rights of the applicant which are possessed by other properties and that a variance, if granted, would not constitute a special privilege of the recipient not enjoyed by his or her neighbors

since, based on a field survey, other properties near the Carpy property have on-site access without the need for traversing another private property. Approval of the variance would therefore not be a grant of special privilege

3. That the authorization of the variance will not be of substantial detriment to adjacent properties, and will not materially impair the purpose and intent of this Chapter or the public interest, nor adversely affect the General Plan because the proposed stretch of private driveway that would exceed the normal maximum gradient would not be visible from adjacent public roadways and would not be inconsistent with the purposes of the W: Winery District, the A: Agriculture General Plan land use designation or the public interest.
  4. That the condition or situation of the specific piece of property of which the variance is sought is not so general or recurrent in the nature as to make reasonably practicable the formulation of a general regulation for such condition or situation since the City has not received similar variance requests in recent years.
  5. That the variance and any buildings or structures permitted by the variance will not be detrimental to the public health, safety and welfare of the community because the proposed variance has been reviewed by the Fire Chief and to ensure that the Fire Department can provide full service, construction of a 10,500 gallon on-site water tank has been recommended and will be provided to ensure the steep gradient of the driveway would not be detrimental to the public health safety or welfare.
- E. The City Council approves the Lot Line Adjustment between the Greystone Property that would transfer approximately 1.3 acres of land from the Greystone parcel to the Carpy parcel. Under the approved Lot Line Adjustment, the size of the Greystone parcel would increase from 13.41 acres to 14.7 acres of land. The size of the Carpy property would decrease from 5.49 acres to 4.19 acres.
- F. The City Council approves the project entitlements, as identified herein, subject to compliance with the following conditions. This project shall be in conformance with all City ordinances, rules, regulations and policies in effect at the time of issuance of the approval. The conditions noted below are particularly pertinent to this action and shall not be construed to permit violation of other laws and policies not so listed.
1. This approval shall be vested within one (1) year from the date of action. A grading permit for the use allowed under this Use Permit shall have been obtained within one (1) year from the effective date of the Use Permit Amendment or the Use Permit Amendment shall expire; provided however that the Use Permit may be extended for up to two (2) one-year periods pursuant to the St. Helena Municipal Code, Section 17.08.130, Extension of Permits and Approvals.
  2. This approval ("permit") is valid for this use only. New permits must be applied for upon any change in use. These permits will expire if the use is discontinued pursuant to then existing ordinances and regulations.
  3. Any request for an extension of the terms of this approval must be justified in writing and received by the Planning Department at least thirty (30) days prior to expiration.



4. All required fees, including planning fees, development impact fees, engineering or building fees, shall be paid prior to issuance of a building permit. Fees shall be those in effect at the time of the issuance of the building permit.
5. Compliance with all permit conditions shall occur in accordance with specific regulations, but in all cases no later than prior to occupancy or initiation of use unless another time is set by law or by this approval. Occupancy or final inspection of a project may be withheld if all conditions, including payment of fees for services rendered by the City, are not met.
6. The applicant will defend and indemnify and hold the City, its agents, officers, and employees harmless against any claim, action or proceedings to attack, set aside, void or annul an approval so long as the City promptly notifies the applicant of any such claim, action, or proceedings and the City cooperates fully in the defense of the action or proceedings.
7. Provided they are in general compliance with this permit, minor modifications may be approved by the Planning Director.
8. This permit shall run with the land and shall be binding upon all parties having any right, title or interest in the real property or any part thereof, their heirs, successors and assigns, and shall inure to their benefit and the benefit of the City of St. Helena.
9. The primary purpose of this review is for compliance with the General Plan and Zoning Ordinance. The owner/applicant is responsible for meeting with the Building Official/Fire Inspector to review compliance with Building and Fire Codes, including fire protection systems and the accessibility standards of Title 24.
10. Prior to submittal of a building permit application, all plan sheets shall be revised to be consistent with the City's approval and coordinated with the civil and landscaping plans.
11. Construction shall be in compliance with plans reviewed and approved by the City on September 12, 2006, as amended to comply with the applicable conditions provided herein and the associated adopted mitigation measures.
12. Prior to issuance of building permit, the applicant shall be required to obtain approval of the Napa County Department of Environmental Management for the upgraded on-site wastewater treatment facility related to the Carpy house.
13. Plant materials shall be purchased from a source that verifies they have been inspected for glassy winged sharpshooter to ensure that they will not contribute to the spread of Pierce's disease to the surrounding vineyards.
14. Unless otherwise provided in the Arborists Report for the project, each tree or group of trees to be preserved within the vicinity of the construction site shall be protected by enclosure with a six (6) foot chain link fence prior to grading or movement of heavy equipment. The minimum distance of the fence from the tree shall be at the drip line, but may be extended an

additional 10' to include the root zone which shall be determined by the project or City Arborist. Fencing shall remain in place until such time as the Building Inspector is assured the trees are no longer in danger of construction damage.

15. Unless otherwise provided in the Arborists Report for the project, the following activities are prohibited under the drip line of protected trees unless authorized by the Planning Director under the advice of the City Arborist or project arborist:
  - a. Change in the amount of irrigation provided to the protected tree from that which was provided prior to the commencement of construction activity.
  - b. Trench, grade or pave into the drip line of a protected tree.
  - c. Change the grade elevation by more than 6" within the drip line of the tree and for a distance of 30' outward from the drip line of the tree.
  - d. Park or operate any motor vehicle within the drip line area of a protected tree, except within designated parking areas.
  - e. Place or store any equipment or construction materials within the drip line area of the tree.
  - f. Attach any signs, ropes, cables or any other items to the tree.
  - g. Cut or trim any branch of the tree for temporary construction purposes.
  - h. Place or allow flowing into or over the root zone area of any tree any oil, fuel, concrete mix, paint, solvent, plaster or other deleterious substance.
16. The applicant shall be required to submit and receive approval of an encroachment permit from the California Department of Transportation (Caltrans) to allow for off-site disposal of stormwater prior to receiving a grading or building permit authorizing site work or construction activities on the site.
17. The applicant shall provide for the enclosed storage of trash and separated recyclable materials for the Carpy house. Should the area designated for trash storage prove insufficient to accommodate approved uses on the site, the applicant agrees to provide alternative means (e.g. expanded facilities, more frequent collection, etc.) to address this issue.
18. The applicant and/or construction manager shall notify all contractors and subcontractors that no trespassing is allowed on adjoining properties.
19. This property adjoins an agricultural district. There exists a right-to-farm the adjoining property. There is a good faith expectation that no complaints will occur regarding legal, normal agricultural activities on the adjacent land. Such activities may include day or night disbursement of chemicals, and creation of dust, noise, or fumes.
20. The applicant shall be responsible for compliance with all mitigations measures adopted as part of this project and listed in the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program (MMRP) adopted as part of the this permit. The following changes shall be made to the mitigation measures:



- a) Mitigation Measure 1 (b) shall be revised to read: "The height of light standards shall not exceed 14.5 feet in height."
  - b) Mitigation Measure 1 shall be amended by adding the following language: "(c) parking lot light fixtures shall be equipped with cut off lenses. " "(d) parking lot lights shall be turned off when not needed."
  - c) Mitigation 5 shall be deleted.
  - d) Mitigation 5 shall be revised to read as follows: "If historic, archeological, paleontological or Native American materials or artifacts are identified during project construction, including work within a State right-of-way, work on the project shall cease until a resource protection plan conforming to CEQA Section 15064.5 is prepared by a qualified archeologist and/or paleontologist and approved by the St. Helena Planning Director. For discoveries of cultural resources in a State right-of-way, the Caltrans District 4 Cultural Resource Study Office shall be contacted immediately. Project work may be resumed in compliance with such plans. If human remains are encountered, the County Coroner shall be contacted immediately and the provisions of State law carried out. This mitigation measure shall be noted on construction plans and specifications."
21. No signs shall be installed without approval of a Sign Permit, as required by the City's Sign Ordinance.
22. The applicant shall construct a temporary vehicular and pedestrian barrier between the Carpy property and the Conolly property to the south that shall remain in place during the construction period. The barrier shall be removed following granting of a Certificate of Occupancy by the City.
23. The existing on-site septic system for the Carpy house shall be disconnected and connected to the private septic system serving the Markham/CIA/Wine Country Inn prior to commencement of grading work on the parking lot. A sewer line permit shall be obtained from the Napa County Environmental Management Department.

Approved at a Regular Meeting of the St. Helena City Council on September 12, 2006 by the following vote:

AYES: Councilmembers Novak, Schoch, Potter, Mayor Britton

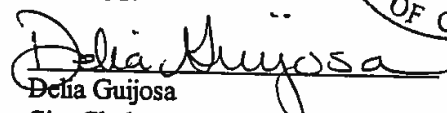
NOES: Councilmember Sklar

ABSENT: None

APPROVED:

  
Delford Britton  
Mayor

ATTEST:

  
Delia Gujosa  
City Clerk



**CITY OF ST. HELENA**

**RESOLUTION NO. 2008-76**

**APPROVING AN INCREASE TO THE REGULATED FOOD AND BEVERAGE  
ESTABLISHMENTS INVENTORY, A USE PERMIT AMENDMENT TO  
INCREASE ENROLLMENT, TO MODIFY CONDITIONS PERTAINING TO  
ADVERTISING, TO CONSTRUCT A NEW TEACHING KITCHEN, TO  
RELOCATE THE TEACHING KITCHEN AND TO ADD A  
CAFÉ/DELICATESSAN FOR THE CULINARY INSTITUTE OF AMERICA AT  
2555 MAIN STREET**

**RECITALS**

1. The Culinary Institute of America at Greystone (the "CIA") submitted an application to make improvements to its existing facilities to allow for an increase in enrollment and to meet the overall operational needs of the main campus and its off-site dormitory.

The project involves two sites; the Greystone Campus at 2555 Main Street and the Vineyard Lodge complex located at 830 Pratt Avenue. The modifications to the Pratt Avenue site are addressed in Resolution No. 2008-75 approved by the City Council on August 26, 2008.

2. The project components at the Greystone campus consist of an increase in student enrollment from 104 students to 200 students, establishment of a new 25-35 seat café/delicatessen, relocated retail store, construction of a new teaching kitchen, relocation of the chocolate room, and an amendment to the existing water use agreement.

3. The existing parking at the Greystone campus provides for 261 spaces. This includes the new parking lot which an additional 85 space parking lot to the existing 176 space primary parking lot in 2006.

4. The Culinary Institute of America was first approved in 1993. The original use permit #93-105 has been amended several times as reflected in permit amendments approved in the years 1996, 1997, 2001, 2003, 2004, 2006 and 2007.

5. The Planning Commission considered the project, including modifications to the 2555 Main Street campus and to the 830 Pratt Avenue campus at noticed public hearings held on July 1, 2008 and July 15, 2008.

6. An Initial Study was prepared and circulated for public comment from June 12, 2008 through July 15, 2008. The Commission recommended adoption of a Resolution Adopting a Mitigated Negative Declaration and Mitigation Monitoring Program for the project.

7. The Planning Commission recommended approval of the Use Permit Amendment to the City Council on July 15, 2008.

8. The City Council of the City of St. Helena, State of California, held a noticed public hearing for this project on August 26, 2008.

## RESOLUTION

NOW, THEREFORE, The City Council for the City of St. Helena resolves as follows:

A. The Planning Commission considered and adopted a Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program for the project as reflected in Resolution No. 2008-74 approved by the City Council on August 26, 2008.

B. The Planning Commission makes the following Use Permit findings, Section 17.168.050, to support the motion to approve the Use Permit Amendment:

1. That the proposed use would not generate odors, fumes, dust, light, glare, radiation or refuse that would be injurious to surrounding uses or to the community.
2. That the proposed use would not generate levels of noise that adversely affect the health, safety, or welfare of neighboring properties or uses.
3. That the proposed use would not generate traffic noise in excess of the "normally acceptable" range identified in the General Plan.
4. That the proposed use would not make excessive demands on the provision of public services including water supply, sewer capacity, energy supply, communication facilities, police protection, and fire protection.
5. That the proposed use would provide adequate ingress and egress to and from the proposed location.
6. That allowing the proposed use would not conflict with the City's goal of maintaining the economic viability of a local serving economy.
7. That the proposed use would be compatible with surrounding land uses and would not conflict with the purpose established for the district within which it would be located.
8. That the proposed use would not be in conflict with the City's General Plan.
9. That the proposed use would not be injurious to public health, safety, or welfare.
10. That granting the use permit would not set a precedent for the approval of similar uses whose incremental effect would be detrimental to the City or would be in conflict with the General Plan.
11. That, as demonstrated on a detailed plan submitted by the applicant, adequate off-street parking to accommodate the long term parking needs of employees and business owners and customers is available.
12. That the capacity of surrounding streets is adequate to serve the automobile and delivery truck traffic generated by the proposed use.

C. The Use Permit Amendment for the above described use is granted subject to compliance with the following conditions. Permit shall be in conformance with all City ordinances, rules, regulations and policies in effect at the time of issuance of a building permit. The conditions noted below are particularly pertinent to this permit and shall not be construed to permit violation of other laws and policies not so listed.

1. The Use Permit Amendment shall be vested within one (1) year from the date of approval. A building permit for the use allowed under this Use Permit shall have been obtained within one (1) year from the effective date of the Use Permit or the Use Permit shall expire; provided however that the Use Permit may be extended for up to two (2) one-year periods pursuant to the St. Helena Municipal Code, Section 17.08.130, Extension of Permits and Approvals.
2. This permit is valid for this use only. New permits must be applied for upon any change in use. These permits will expire if the use is discontinued pursuant to then existing ordinances and regulations.
3. The Use Permit Amendment shall not become effective until fourteen (14) calendar days after approval, providing that the action is not appealed by the City Council or any other interested party within that 14 day period.
4. Any request for an extension of the Use Permit Amendment must be justified in writing and received by the Planning Department at least thirty (30) days prior to expiration.
5. All required fees, including planning fees, development fees, housing fees, building fees toilet retrofit fees, and St. Helena Unified School District fees shall be paid prior to issuance of building permit. Fees shall be those in effect at the time of the issuance of the building permit.
6. Compliance with all permit conditions shall occur in accordance with specific regulations but in all cases no later than prior to occupancy or initiation of use unless another time is set by law or by this approval. Occupancy or final inspection of a project may be withheld if all conditions, including payment of fees for services rendered by the City, are not met.
7. The applicant will defend and indemnify and hold the City, its agents, officers, and employees harmless of any claim, action or proceedings to attack, set aside, void or annul an approval so long as the City promptly notifies the applicant of any such claim, action, or proceedings and the City cooperates fully in the defense of the action or proceedings.
8. The Planning Director may approve minor modification provided they are in general compliance with the project as approved by the City Council.

9. This permit shall run with the land and shall be binding upon all parties having any right, title or interest in the real property or any part thereof, their heirs, successors and assigns, and shall inure to their benefit and benefit of the City of St. Helena.
10. The primary purpose of this review is for compliance with the General Plan and Zoning Ordinance. The owner/applicant is responsible for meeting with the Building Official / Fire Inspector to review compliance with Building and Fire Codes, including fire protection systems and the accessibility standards of Title 24.
11. All uses shall be in compliance with the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Plan as adopted with Resolution No. 2008-74 approved by the City Council on August 26, 2008.
12. Condition 10A of Use Permit #93-105 is amended to allow an expansion of the student enrollment at the Greystone campus from 104 students to 200 students.
13. Construction shall be in compliance with plans marked Greystone Campus Exhibit B reviewed and approved by the Planning Commission on July 15, 2008. Use Permit #93-105 is amended to modify the floor plan and uses of the Greystone building as follows:
  - To relocate the existing retail store consistent with Greystone Campus Exhibit B. The proposed new location will occupy a portion of the current CIA museum and will remain at 3,100 sq. ft. The expansion is an effort to provide students with an educational retail environment not currently available on site.
  - To construct a new teaching kitchen consistent with Greystone Campus Exhibit B. The teaching kitchen will be located in the space occupied by the existing retail store. The kitchen will be 2,871 sq. ft. which will provide larger and more efficient educational facility for students.
  - To relocate the existing third floor chocolate room to the first floor consistent with Greystone Campus Exhibit B. The chocolate room will provide a larger and more efficient educational facility for students for making chocolates.
14. Use Permit #93-105, as amended in 1996 is amended as follows to remove restrictions pertaining to advertising of the retail store to allow advertising in national and/or visitor oriented publications and the applicant's web site. The revised condition shall state:

*A 3,100 s.f. campus store may be operated as an accessory use to the school within the main winery building. The store shall be limited to the hours of operation of 10:00 a.m. - 7:00 p.m. Items sold at the retail store shall be directly related to the food and beverage industry or to the incidental needs of the student residents, such as toiletries and stationery. Only food items prepared by students or specialty products such as olive oils, vinegars and spices shall be permitted to be sold at the campus store. No deli food items may be sold. Bottled wine sales may be permitted. No other retail spaces shall*

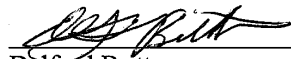
*be created. The store may be advertised in educational, food service, trade and Napa county newspapers of record. ~~No advertising will be placed in national consumer publications or visitor oriented publications.~~ Site signage will be placed to direct visitors to the store, a maximum of 2 in main lot, one by restaurant and one by the main entry. No signage for the campus store shall be visible from Hwy. 29. No wine tasting facility is authorized by this permit approval. The campus store shall not be subleased to another entity but may be managed by another entity. No retail or other space shall be sublet to operators other than the CIA.*

15. A new 25-35 seat café/delicatessen may be constructed on the first floor consistent with Greystone Campus Exhibit B. The primary purpose of the café is to satisfy an educational requirement of students in its Baking and Pastry Program. The Regulated Eating and Drinking Establishments Inventory shall be amended to reflect 31 restaurants.
16. Where the property adjoins agricultural districts, there exists a right-to-farm the adjoining property. There is a good faith expectation that no complaints will occur regarding legal, normal agricultural activities on the adjacent land. Such activities may include day or night disbursement of chemicals, and creation of dust, noise, or fumes.
17. To reduce disturbance of residents in the project vicinity, construction activities which generate noise that can be heard at the property line of any parcel of real property within the City limits shall be limited to 8:00 a.m. to 5:00 p.m. Monday through Saturday. Delivery of materials/equipment and cleaning and servicing of machines/equipment shall be limited to 7:00 a.m. to 6:00 p.m. Exceptions to these time restrictions may be granted by the Public Works Director for one of the following reasons: (1) inclement weather affecting work, (2) emergency work, or (3) other work, if work and equipment will not create noise that may be unreasonably offensive to neighbors as to constitute a nuisance. The City Engineer must be notified and give approval in advance of such work. No construction activities shall occur on Sundays or federal or local holidays that generate noise that can be heard at the property line of any parcel of real property within the City limits.

Approved at a Regular Meeting of the St. Helena City Council on August 26, 2008, by the following vote:

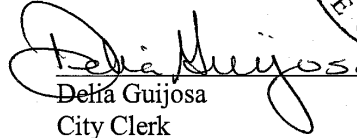
AYES: Councilmembers Schoch, Sklar, Novak, Potter, Mayor Britton  
NOES: None

APPROVED:



Delford Britton  
Mayor

ATTEST:

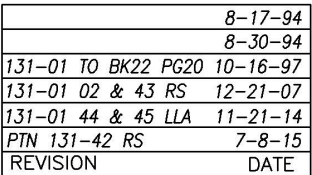
  
Delia Guijosa  
City Clerk





Tax Area Code  
3000, 3002  
85001

A diagram showing a line of sight with a scale bar. The scale bar is labeled  $1'' = 400'$ .



Retraced 1985  
**1954**

9-13









Attachment 5

RECEIVED  
PLANNING DEPARTMENT

JUN 27 2016

**GREYSTONE MASTER PLAN PROJECT DESCRIPTION**

City of St. Helena

The Culinary Institute of America (the "CIA") currently has an enrollment of 200 students at its historic property located at 2555 Main Street ("Greystone"). The CIA recently purchased the American Center for Wine Food & the Arts ("Copia") in the City of Napa. The acquisition of Copia allows the CIA to reduce the number of employees, culinary enthusiast education, and large scale events at Greystone by relocating employees, programs, and event activities to Copia. The CIA proposes a major reprogramming of the activities at Greystone ("Master Plan") under which it will renovate portions of the Greystone interior to provide additional and more efficient educational facilities while substantially reducing traffic, water, effluent and energy consumption at this historic facility. Under the Master Plan the CIA proposes expanding its current student enrollment of 200 students by 100 students to a total student capacity of 300 (a reduction of 20 students from that originally proposed in the CIA's neighborhood meeting in April). In conjunction with the Master Plan the CIA is requesting approval of additional student housing at the Vineyard Lodge property on Pratt Avenue.

To implement the Master Plan the CIA proposes certain modifications to the Greystone Campus, the vast majority of which are interior renovations not visible from the exterior. In a separate application the CIA proposes an expansion of housing at the Vineyard Lodge site that is intrinsically intertwined with the CIA's Master Plan by allowing it to build additional housing that will not only accommodate the expanded student enrollment, but also allow it to provide additional housing for students who are currently housed in the St. Helena community and elsewhere. The modifications to the Vineyard Lodge property are set forth in the Project Description for that property, but are requested as complementary improvements to the Master Plan.

1. Master Plan at Greystone Site:

The CIA proposes the following Use Permit amendments for the Greystone site:

- o Increase enrollment to 300 students.
- o Approval for excavation of a storage cave under the Wine Spectator Greystone Restaurant ("WSGR") and the addition of modular units secluded behind the Greystone building. A geotechnical report regarding the cave storage excavation from Condor Earth Technologies, Inc. is attached and concludes that these soils are appropriate for development of the cave. In addition, the CIA separately has requested approval of a very modest improvement for additional storage adjacent and behind the Williams Flavor Discovery Center ("FDC") in the original Greystone Gate House.
- o The Master Plan will then be implemented by an interior renovation project that accomplishes the following:

- areas along with a Student Learning Commons. At the north end of the first floor the CIA will excavate caves (under the current second floor terrace) that will provide storage areas.
- On the Second Floor, the WSGR will be closed and converted to a Student Dining Commons along with the development of a new Special Events Kitchen on the Second Floor.
- On the Third Floor and new Baking and Pastry Kitchen will be developed at the south end. The existing Teaching Kitchens on the north end will be demolished and rebuilt to provide two new Skill Development kitchens in the former bake shop area along with a Teaching Kitchen, a Garde Manager Kitchen, a Multi-use Kitchen, an Ala Carte Kitchen, storage and a Specialty Kitchen essential to provide the educational facilities necessary for professional culinary education in the 21st Century.
- Finally, a small number of additional storage facilities will be added on the outside of the Third Floor on the back of the historic Greystone facility, visible solely to those students, staff, and those visitors who traverse the driveway at the rear end of the property, and not at all visible from Main Street or elsewhere, and a minor storage addition has been proposed to the rear of the FDC that will also not be visible from off-site.

These modifications will result in a substantial reduction of impacts at Greystone, notwithstanding the expanded student capacity. The reduced impacts arise from the following changes to the programming at the site:

- The WSGR is currently operated as a 190 seat restaurant open 362 days per year with lunch and dinner service. The CIA has operated a teaching kitchen in the FDC for a number of years that allows students in the Farm to Table component of their educational program to have experience from growing and harvesting the food, to preparing and serving the food in an educational setting with 58 seats. In conjunction with the use permit amendments contemplated under this Master Plan, the WSGR will be eliminated and the CIA's restaurant on this property will be moved to the FDC with the capacity remaining at 58 seats, resulting in the elimination of 190 seats at this campus. The new restaurant will be student-run, and will serve meals only five days a week for 36 weeks (180 days) per year rather than the WSGR which operated 362 days per year and served lunches and dinners.
- The elimination of a 190 seat restaurant, along with the relocation of employees, programs, events to Copia, substantially reduces traffic (see enclosed report from Crane Transportation Group ("CTG") at the site. The CTG report calculates that, under the Master Plan, the traffic from Greystone would reduce traffic on State Route 29-128 by at least 15 two-



way trips during AM peak traffic periods, along with a reduction of 21 two-way trips during the peak PM traffic periods to and from the Greystone campus results in a significant and substantial overall reduction of traffic along this route during peak traffic hours. Most importantly, notwithstanding the implementation of the Master Plan, the traffic resulting from the project does not cause the intersection at Main Street – Pratt Avenue to exceed signal light warrants for that intersection, notwithstanding the development of the Las Alcobas Hotel development.

- In addition to the reduction in two-way trips at peak hours resulting from the Master Plan at Greystone, the Master Plan will also result in a substantial reduction in effluent disposal for activities at Greystone as set forth in the Wastewater Feasibility Analysis from Summit Engineering which concludes that the wastewater flows from Greystone will decrease below the design capacity and historical CIA allocation at the Markham Combined Wastewater System ("MCWS").
- In its Water Availability Analysis ("WAA") Summit also concludes that the use of City water under the CIA Greystone site Water Agreement with the City of St. Helena will be substantially reduced. Under the current Water Agreement the Greystone Property is allowed to utilize an Annual Limit equal to an average of 15,900 gpd. The dishwashing and other kitchen facilities are out-dated, and fail to meet current water use efficiency requirements. The renovation plan discussed above will result in the elimination of the existing three separate dish wash rooms, and replacement with a single dish room. The new dishwashing equipment alone will result in a savings of approximately 1,200,000 gallons per year. The elimination of the WSGR, the reduction of employees, and the relocation of programs and events to Copia will also contribute to a reduction in the quantity of water use at Greystone to only a proposed demand of 9,867 gpd. Under previous Use Permit Amendments, the CIA has transferred allowable usage from its Vineyard Lodge site to Greystone, and then later on the expansion of housing at Vineyard Lodge, has transferred allowable water usage back to the Vineyard Lodge. In addition to the 15,900 gpd allowed at the Greystone site, the CIA's Annual Limit at Vineyard Lodge is based on an allowable 4,750 gpd for a total combined Annual Limit based on an average of 20,650 gpd. Because these two facilities are inter-related, the CIA proposes in this application that the two separate Water Agreements for these two properties be combined into one single Water Agreement with a total Annual Limit based on 20,650 gpd. This combined Water Agreement would be "water neutral" because the total capacity would not exceed the current allowable use, but would simplify management and operational issues by allowing the CIA to apportion water use as needed between these two facilities that are jointly necessary for the delivery of its educational programs without the need to reallocate water use under separate Water Agreements.

- o Finally, this project is "water neutral" because the CIA has the ability to provide additional on-site water from previously approved wells on its parcels on Main Street. The CIA currently uses its on-site water well solely for landscaping needs, but the CIA received approval to utilize well water for domestic water in Resolution 2008-77. In conjunction with the Master Plan the CIA initially will continue to utilize its wells for landscaping purposes. In the event that water use increases beyond the levels calculated by Summit, the CIA has the ability to supplement domestic water use through the connection of its current wells to the domestic water system at Greystone once it receives proper permitting from the County of Napa Environmental Services Department.

## 2. Modification of Condition 10.D.

Section 10.D of the original Greystone Use Permit, Resolution 93-105, initially imposed strict restrictions on advertising the Retail Store within Greystone. In Resolution 2008-76 those advertising restrictions were eliminated, but Condition 10.D continued to provide specific requirements regarding signage, including the location of one sign "by the restaurant" (referencing the WSGR). Under this application the WSGR will be removed, and the FDC will become a new restaurant in a different location. The Condition further imposed restrictive provisions regarding the CIA's ability to structure operation of the store. The CIA believes that specific signage and operational restrictions are unnecessary when the CIA has proven over a number of years that it operates the property to the highest standards. As a result, the CIA proposes that Condition 10.D be revised to read as follows:

*A 3,100 s.f. campus store may be operated as an accessory use to the school within the main winery building. The store shall be limited to the hours of operation of 10:00 a.m. – 7:00 p.m. Items sold at the retail store shall be directly related to the food and beverage industry or to the incidental needs of the student residents, such as toiletries and stationery. Only food items prepared by students or specialty products such as olive oils, vinegars and spices shall be permitted to be sold at the campus store. No deli food items may be sold. Bottled wine sales may be permitted. No other retail spaces shall be created. The store may be advertised in educational, food service, trade and Napa county newspapers of record. Site signage shall comply with the St. Helena sign ordinance. No wine tasting facility is authorized by this permit.*

## Summary.

The CIA has continuously striven to develop a world class educational institution in the City of St. Helena, while providing a setting for local residents and non-profits to utilize the historic Greystone building for celebrations and fundraising activities. The purchase of the Copia property allows the CIA to relocate staff and programs that will reduce the intensity of operations at Greystone, and allow improvements at this site that will markedly enhance the educational experience while at the same time preserving facilities for important community activities. The CIA's students are a critical part of the employment workforce in the hospitality industry in St. Helena and the surrounding



area. The expansion of the educational program will provide additional restaurant workers during a period when identifying and hiring trained and qualified staff is increasingly difficult. With the expansion of its student enrollment, the CIA feels it has a responsibility to add even more housing than the additional number of students that will be enrolled so that its housing will improve the housing stock, not just maintain the status quo. The CIA's request for additional housing is included in its Use Permit Amendment request for the Vineyard Lodge, which is inter-related with this Master Plan approval.







# THE CULINARY INSTITUTE OF AMERICA AT GREYSTONE

2555 MAIN STREET  
ST. HELENA, CALIFORNIA

USE PERMIT AND DESIGN REVIEW SUBMITTAL

PROJECT TEAM

CLIENT  
CULINARY INSTITUTE OF AMERICA  
2555 MAIN STREET  
ST. HELENA, CA 94574

ARCHITECT  
ARCHITECTURAL RESOURCES GROUP, INC.  
PIER 9, THE EMBARCADERO, SUITE 107  
SAN FRANCISCO, CA 94111

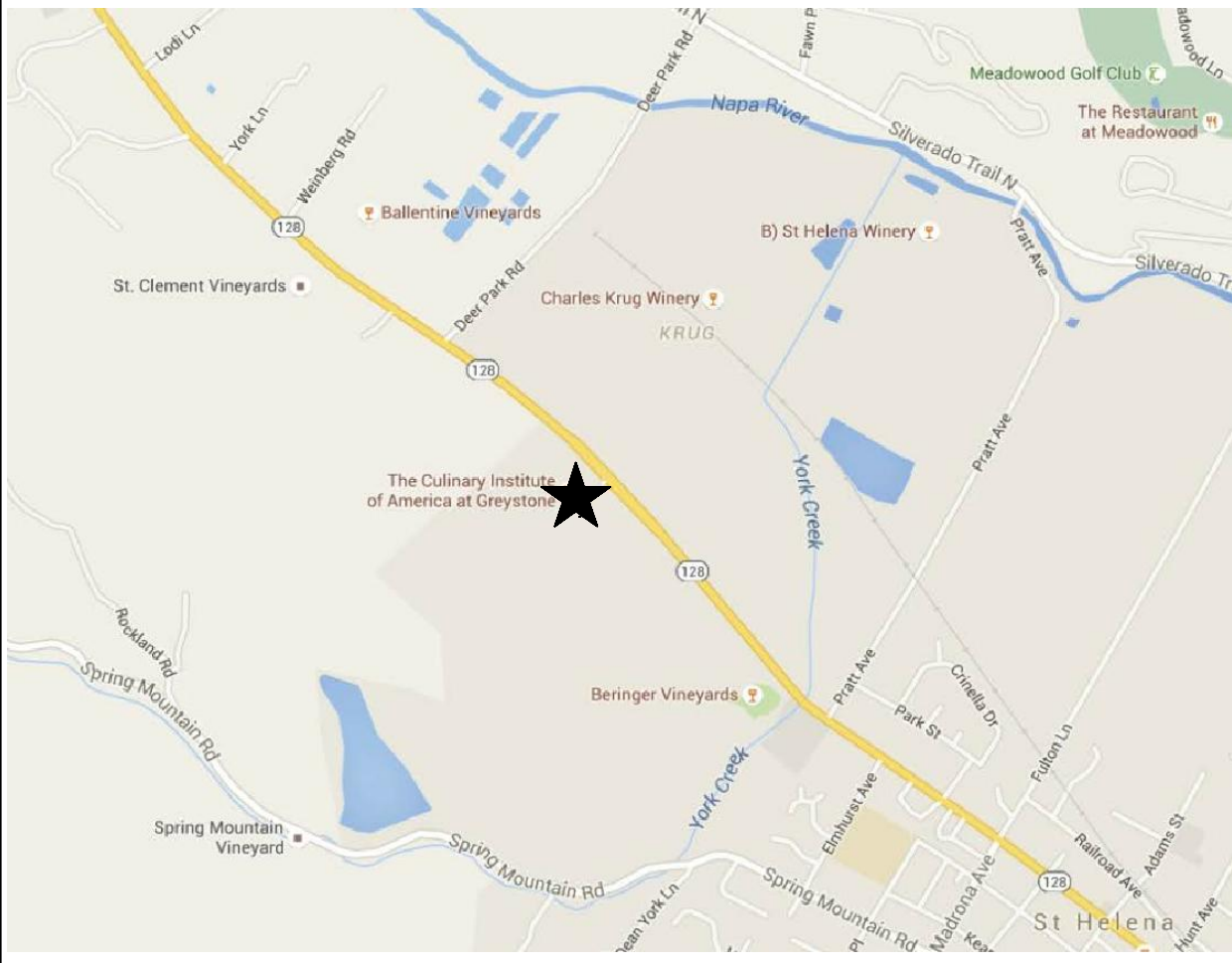
MECHANICAL / PLUMBING ENGINEER  
THE ENGINEERING PARTNERSHIP  
100 BUSH CREEK ROAD, SUITE 204  
SANTA ROSA, CA 95404

CIVIL ENGINEER  
SUMMIT ENGINEERING, INC.  
463 AVIATION BLVD, STE 200  
SANTA ROSA, CA 95403

INDEX OF DRAWINGS

- TITLESHEETS  
T1.0 COVER SHEET  
T1.1 MAP OF EASEMENTS
- CIVIL  
C-1 UTILITY PLAN  
C-2 UTILITY PLAN - ENLARGED SOUTH  
C-3 UTILITY PLAN - ENLARGED NORTH
- ARCHITECTURAL  
A1.0 SITE PLAN  
A1.0-A SITE PHOTOS  
A1.0-B SITE PHOTOS CONTINUED  
A1.1 FIRST FLOOR PLAN - EXISTING  
A1.2 SECOND FLOOR PLAN - EXISTING  
A1.3 THIRD FLOOR PLAN - EXISTING  
A2.1 FIRST FLOOR PLAN - PROPOSED  
A2.1a FIRST FLOOR ENLARGED PLAN - PROPOSED  
A2.2 SECOND FLOOR PLAN - PROPOSED  
A2.3 THIRD FLOOR PLAN - PROPOSED  
A2.4 ROOF PLAN  
A3.0 ELEVATIONS - EXISTING  
A3.1 ELEVATIONS - PROPOSED  
A3.2 SECTIONS

PROJECT LOCATION



PLOT PLAN



Architectural  
Resources Group

Pier 9, The Embarcadero, Suite 107  
San Francisco, California 94111  
415 421 1680

argsgf.com

| NO.       | DESCRIPTION  | DATE     |
|-----------|--------------|----------|
| 1         | PERMIT RESUB | 9/2/2016 |
| REVISIONS |              |          |

## THE CULINARY INSTITUTE OF AMERICA

AT GREYSTONE  
2555 MAIN STREET  
ST. HELENA, CALIFORNIA

SHEET TITLE  
COVER SHEET

USE PERMIT AND DESIGN REVIEW  
SUBMITTAL  
06/21/2016

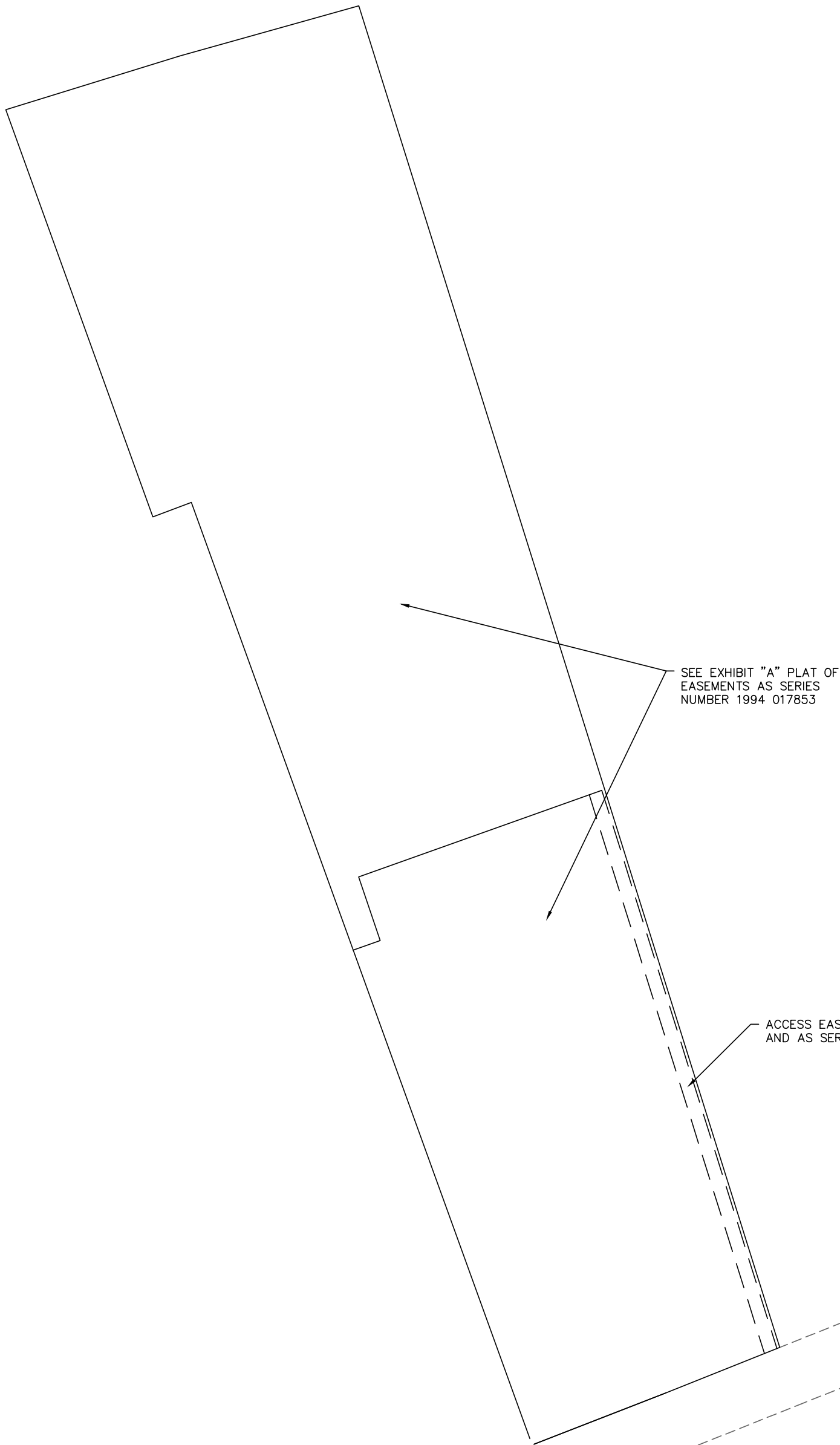
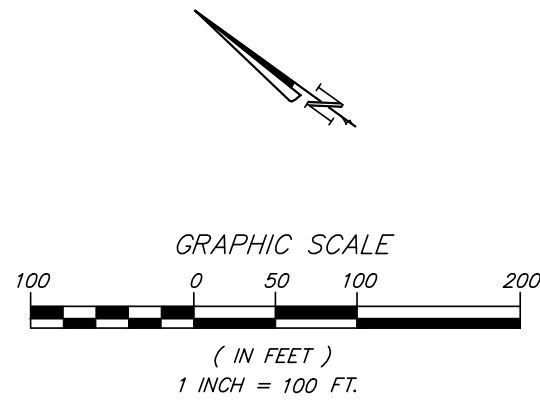
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**T1.0**  
SHEET OF





SEE EXHIBIT "A" PLAT OF  
EASEMENTS AS SERIES  
NUMBER 1994 017853

ACCESS EASEMENT AREA PER BOOK 1763 AT PAGE 774  
AND AS SERIES NUMBER 1994 017853

OPEN SPACE EASEMENT AS SERIES NUMBER 1995 016012

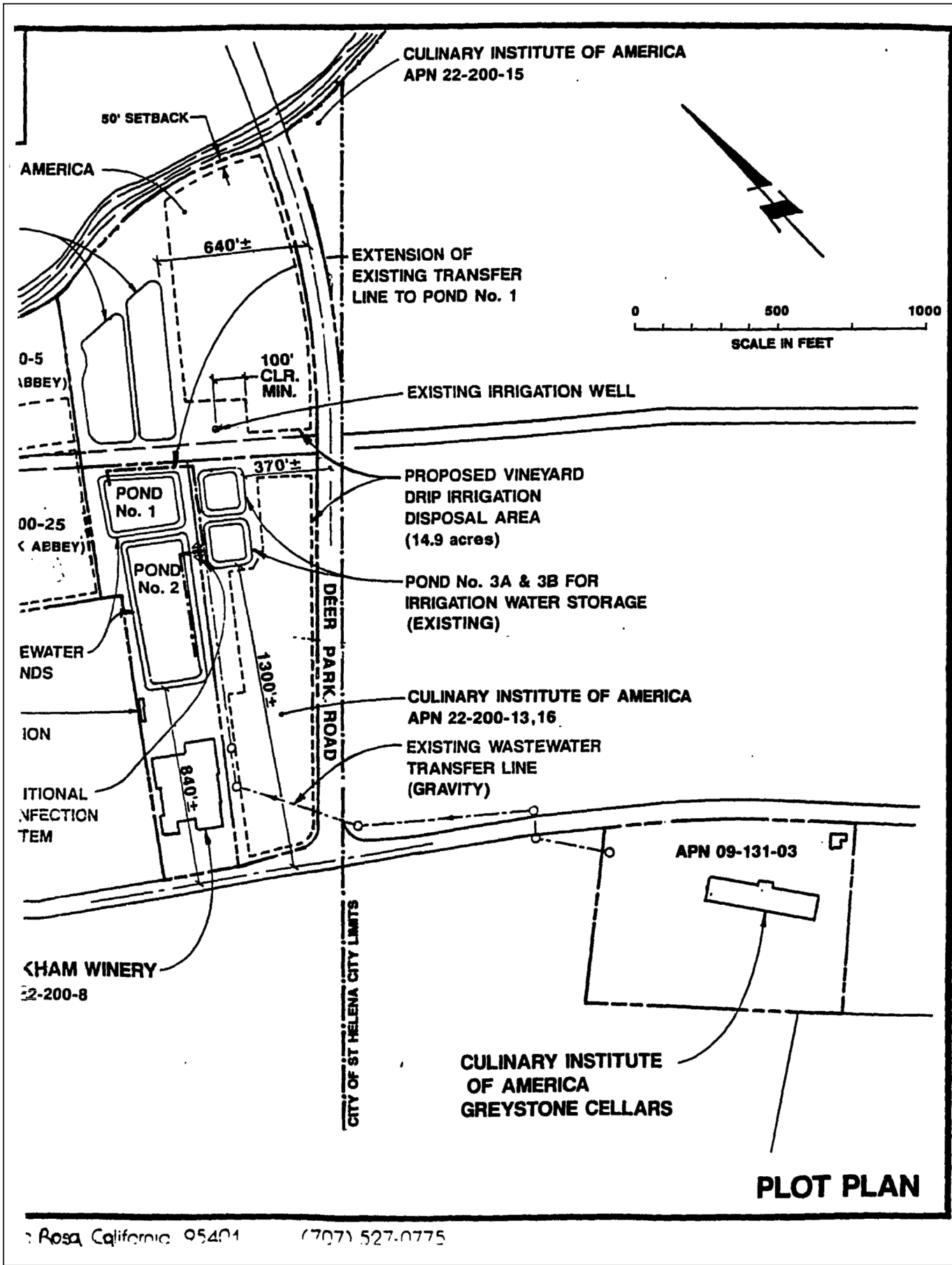


EXHIBIT "A"  
PLAT OF EASEMENTS AS SERIES NUMBER 1994 017853

**ALBION**  
**ALBION SURVEYS, INC.**  
CONSULTING LAND SURVEYORS  
1113 HUNT AVENUE,  
ST. HELENA, CA 94574  
(707) 963-1217  
FAX (707) 963-1829

**DRAWING NOTES**

THIS MAP IS NOT A BOUNDARY SURVEY.  
IT IS PROVIDED TO LOCATE THE PROPOSED SUBJECT PROPERTY  
IN RELATION TO ADJOINING LANDS, HIGHWAYS, ROADS,  
STREETS AND NOT TO GUARANTEE ANY FIXED  
DIMENSION OR AREA.  
A FIELD SURVEY SHOULD BE PERFORMED PRIOR TO ANY  
CRITICAL DESIGN WORK, CONSTRUCTION OR CONVEYANCE.  
EASEMENTS MAY AFFECT THIS PROPERTY.  
THIS SURVEYOR HAS NOT PROVIDED ANY INFORMATION  
REGARDING EASEMENTS BY THE OWNER.

**SITE INFORMATION**

APN: 009-131-003  
ADDRESS: 2555 MAIN STREET  
SAINT HELENA, CA

**MAP OF EASEMENTS  
OF A PORTION OF THE LANDS OF  
CULINARY INSTITUTE OF AMERICA  
COUNTY OF NAPA STATE OF CALIFORNIA**

**REVISIONS & ADDITIONS**

|        |         |     |     |     |       |
|--------|---------|-----|-----|-----|-------|
| DATE:  | 5/15/16 | FB: | 748 | PG: | 45-74 |
| DRAWN: | ALBION  |     |     |     |       |
| DATE:  |         | FB: |     | PG: |       |
| DRAWN: |         | FB: |     | PG: |       |
| DATE:  |         | FB: |     | PG: |       |
| DRAWN: |         | FB: |     | PG: |       |
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**ALBION REFERENCES**

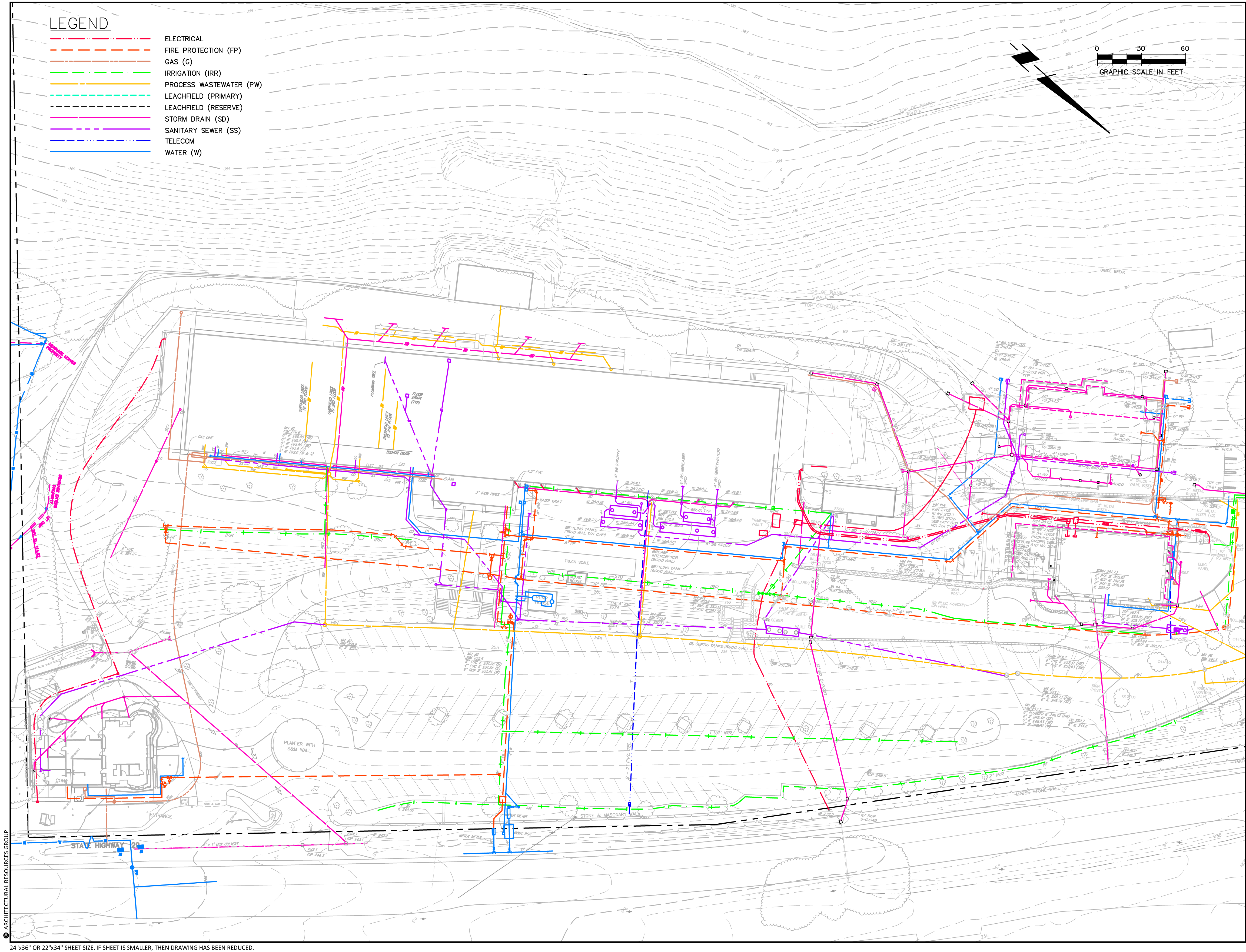
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PROJECT MANAGER: J. SULLIVAN  
DATE OF SURVEY: 04/18/16

CONTOUR INTERVAL = 1'  
VERTICAL DATUM BASED ON  
NAVD '88  
HORIZONTAL DATUM BASED ON  
NAD '83

PER TRIMBLE GPS OBSERVATIONS USING  
OPUS SOLUTION

SHEET 1 OF 5  
C3D PROJECT 1071  
1071\_ESMT.dwg







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**THE CULINARY  
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AMERICA**

AT GREYSTONE

2555 MAIN STREET  
ST. HELENA, CALIFORNIA

SHEET TITLE

**UTILITY PLAN**

USE PERMIT AND DESIGN REVIEW  
SUBMITTAL

**06/21/2016**

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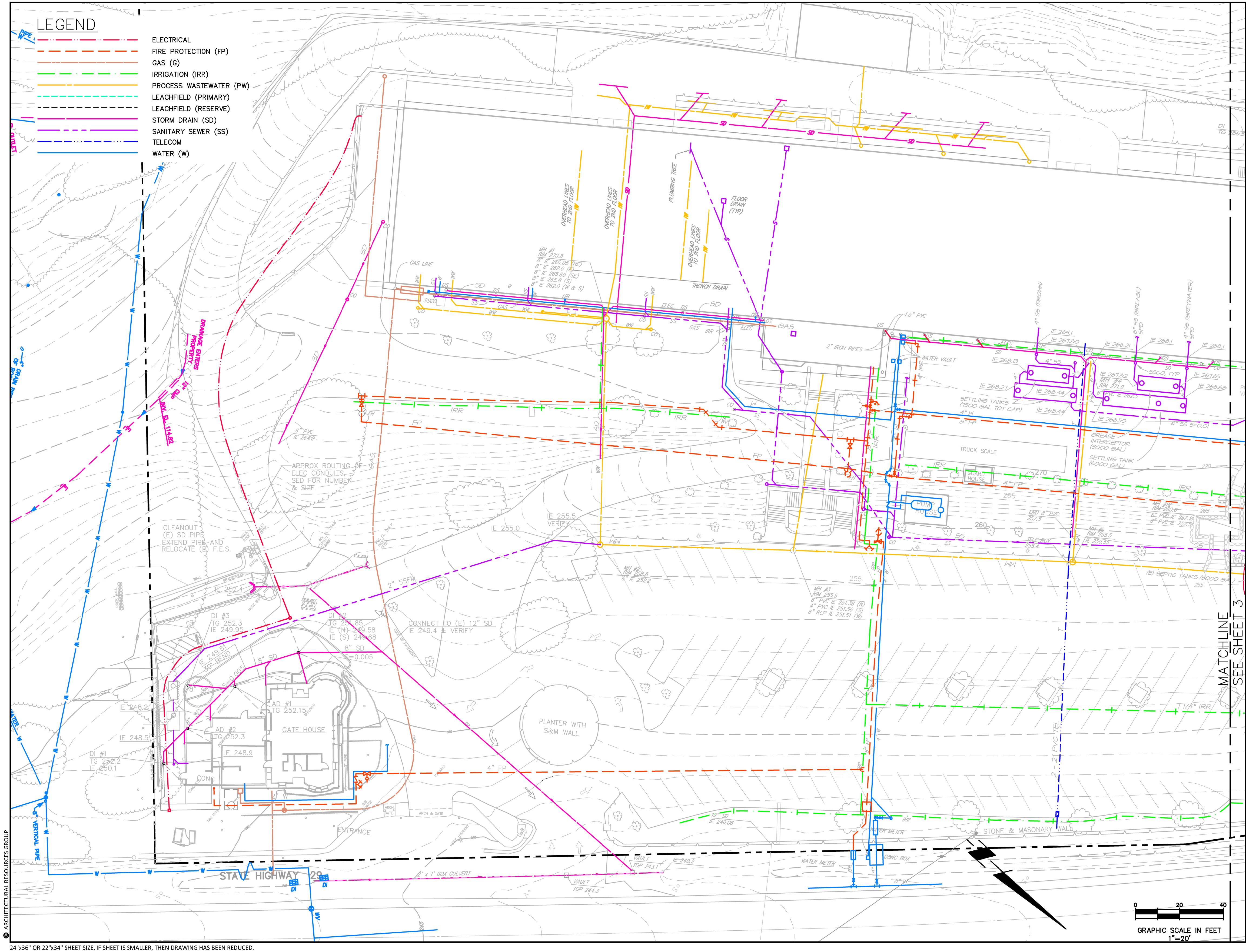
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2555 MAIN STREET  
ST. HELENA, CALIFORNIA

SHEET TITLE  
**UTILITY PLAN  
ENLARGED SOUTH**

USE PERMIT AND DESIGN REVIEW  
SUBMITTAL

06/21/2016

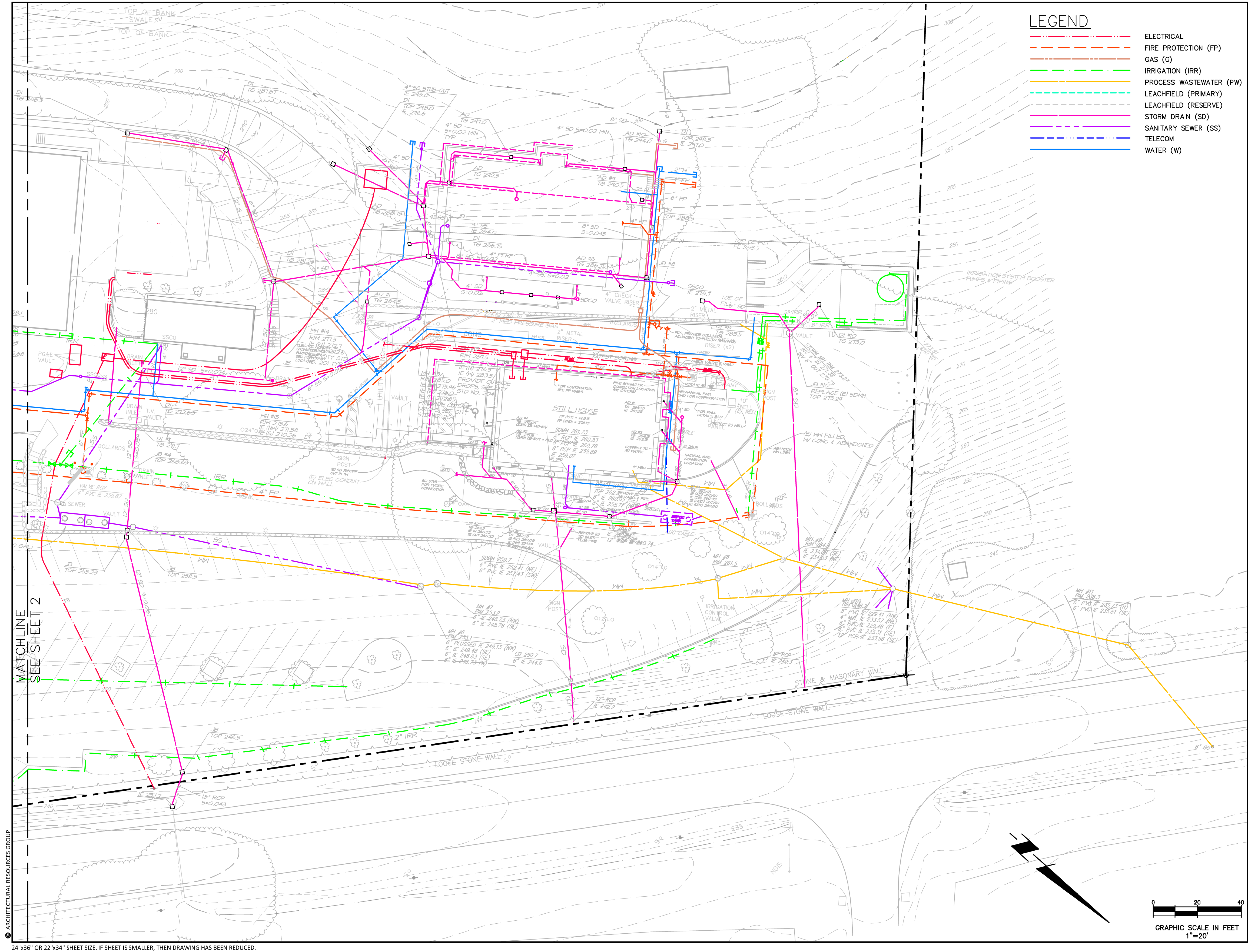
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THE CULINARY  
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AMERICA

AT GREYSTONE

2555 MAIN STREET  
ST. HELENA, CALIFORNIA

SHEET TITLE

UTILITY PLAN  
ENLARGED NORTH

USE PERMIT AND DESIGN REVIEW  
SUBMITTAL

06/21/2016

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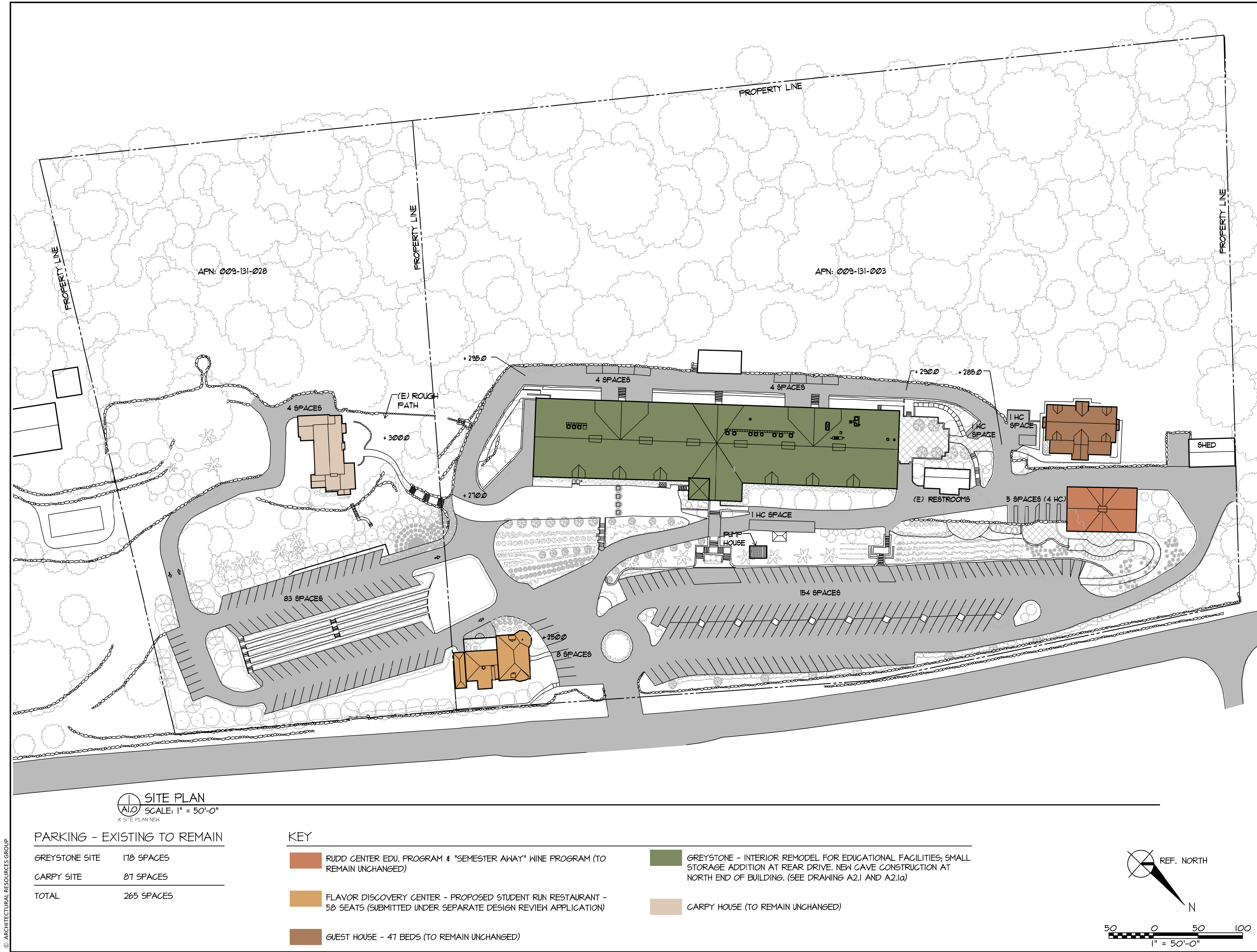
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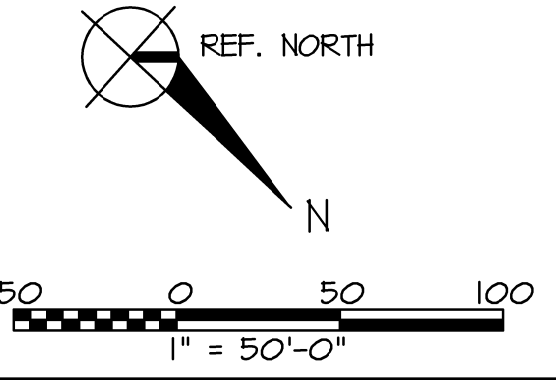
 SITE PLAN  
SCALE: 1" = 50'-0"  
X SITE PLAN NEW

PARKING - EXISTING TO REMAIN

|                |            |
|----------------|------------|
| GREYSTONE SITE | 178 SPACES |
| CARPY SITE     | 87 SPACES  |
| TOTAL          | 265 SPACES |

KEY

- |                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  RUDD CENTER EDU. PROGRAM & "SEMESTER AWAY" WINE PROGRAM (TO REMAIN UNCHANGED)                                             |  GREYSTONE - INTERIOR REMODEL FOR EDUCATIONAL FACILITIES; SMALL STORAGE ADDITION AT REAR DRIVE. NEW CAVE CONSTRUCTION AT NORTH END OF BUILDING. (SEE DRAWING A2.1 AND A2.1a) |
|  FLAVOR DISCOVERY CENTER - PROPOSED STUDENT RUN RESTAURANT - 58 SEATS (SUBMITTED UNDER SEPARATE DESIGN REVIEW APPLICATION) |  CARPY HOUSE (TO REMAIN UNCHANGED)                                                                                                                                           |
|  GUEST HOUSE - 47 BEDS (TO REMAIN UNCHANGED)                                                                               |                                                                                                                                                                                                                                                                   |



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| REVISIONS |             |      |

# THE CULINARY INSTITUTE OF AMERICA

AT GREYSTONE  
2555 MAIN STREET  
ST. HELENA, CALIFORNIA

SHEET TITLE  
SITE PLAN

USE PERMIT AND DESIGN REVIEW  
SUBMITTAL  
06/21/2016

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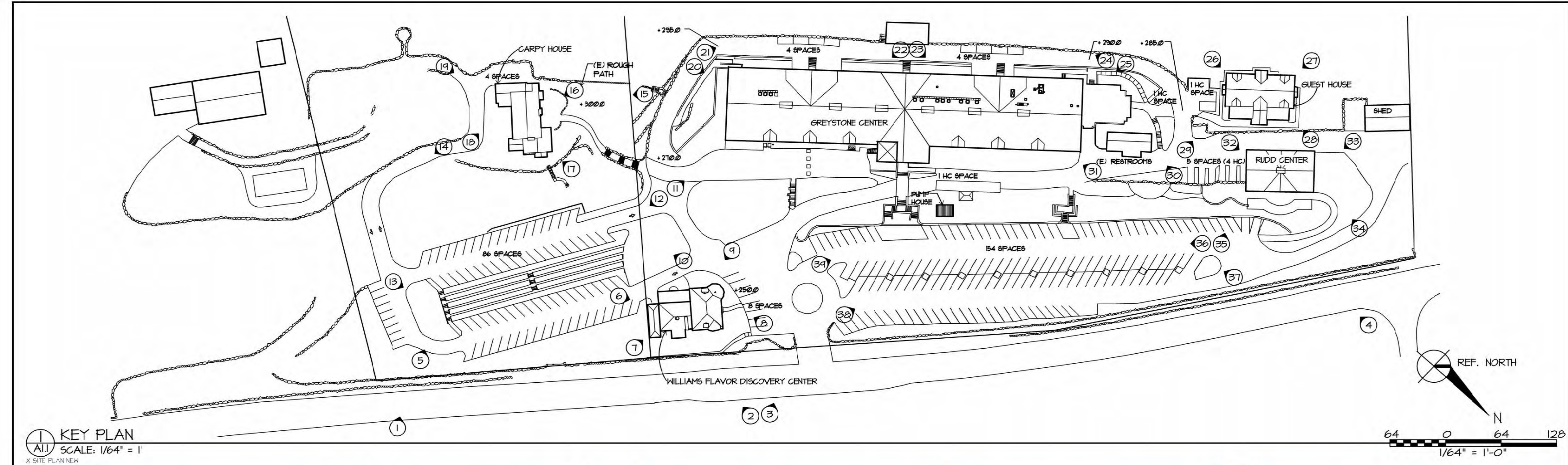
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DRAWING NO.

**A1.0**  
SHEET OF

24"x36" OR 22"x34" SHEET SIZE. IF SHEET IS SMALLER, THEN DRAWING HAS BEEN REDUCED.





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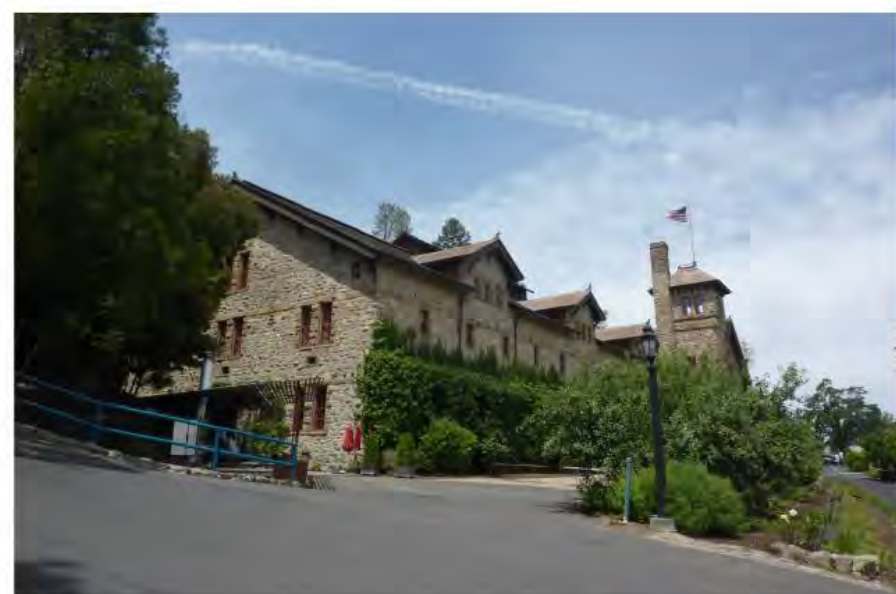
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AT GREYSTONE  
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ST. HELENA, CALIFORNIA

SHEET TITLE  
SITE PHOTOS

USE PERM T AND DESIGN REVIEW  
SUBMITTAL

06/21/2016

PROJ NO.  
11208.01

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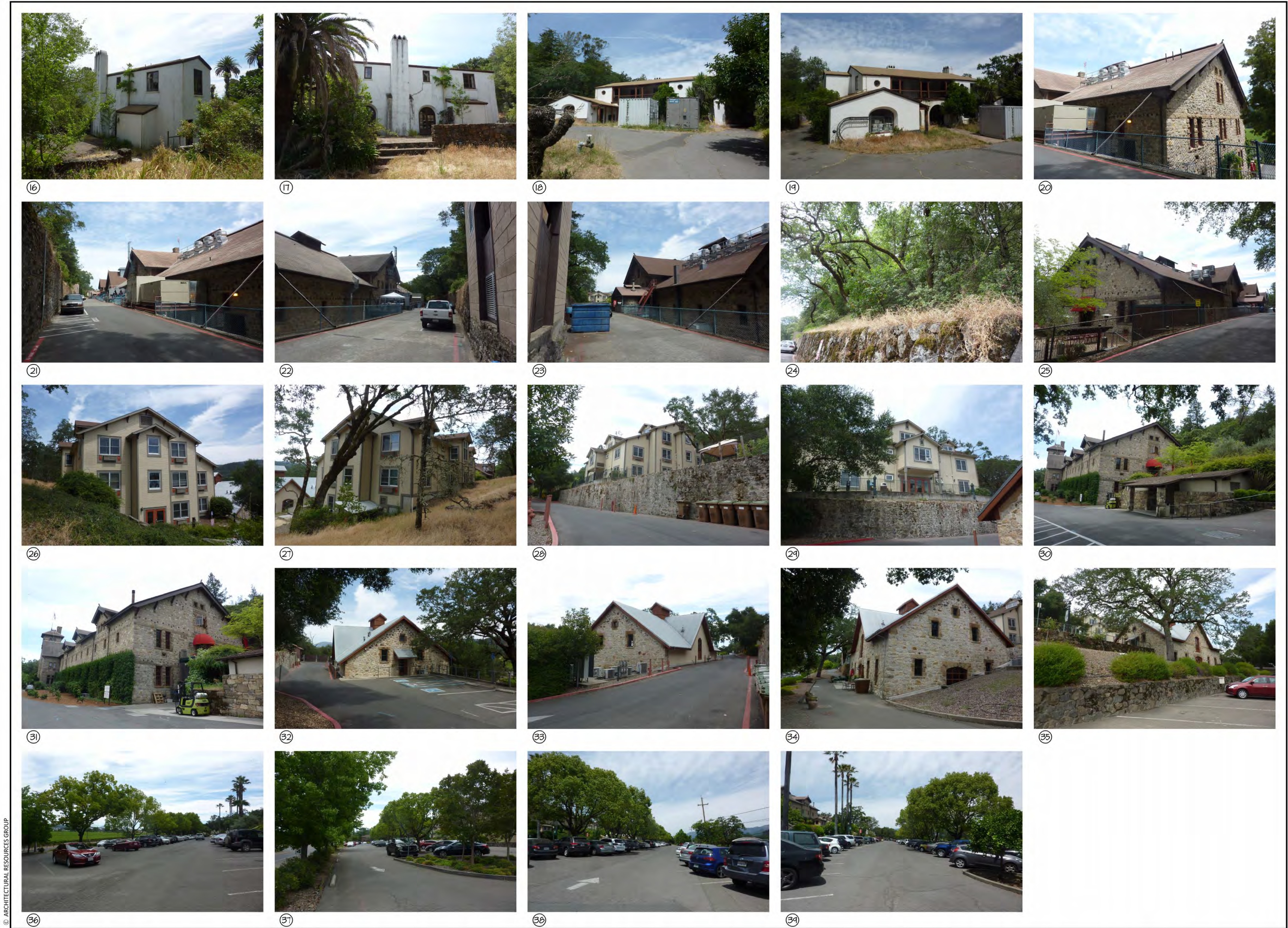
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## THE CULINARY INSTITUTE OF AMERICA

AT GREYSTONE  
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ST. HELENA, CALIFORNIA

SHEET TITLE  
SITE PHOTOS  
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SHEET TITLE  
**GREYSTONE  
FIRST FLOOR PLAN  
EXISTING**

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SUBMITTAL

06/21/2016

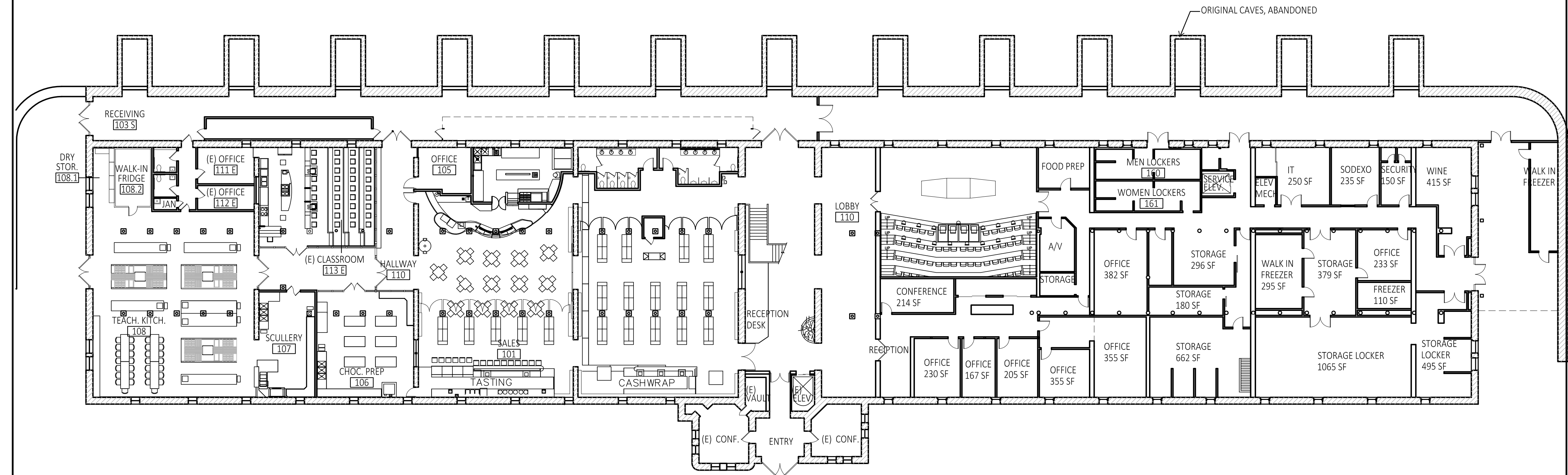
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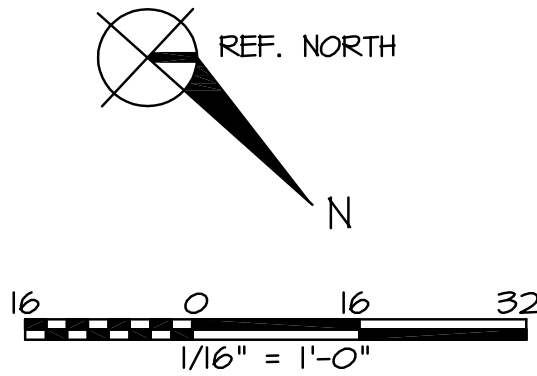
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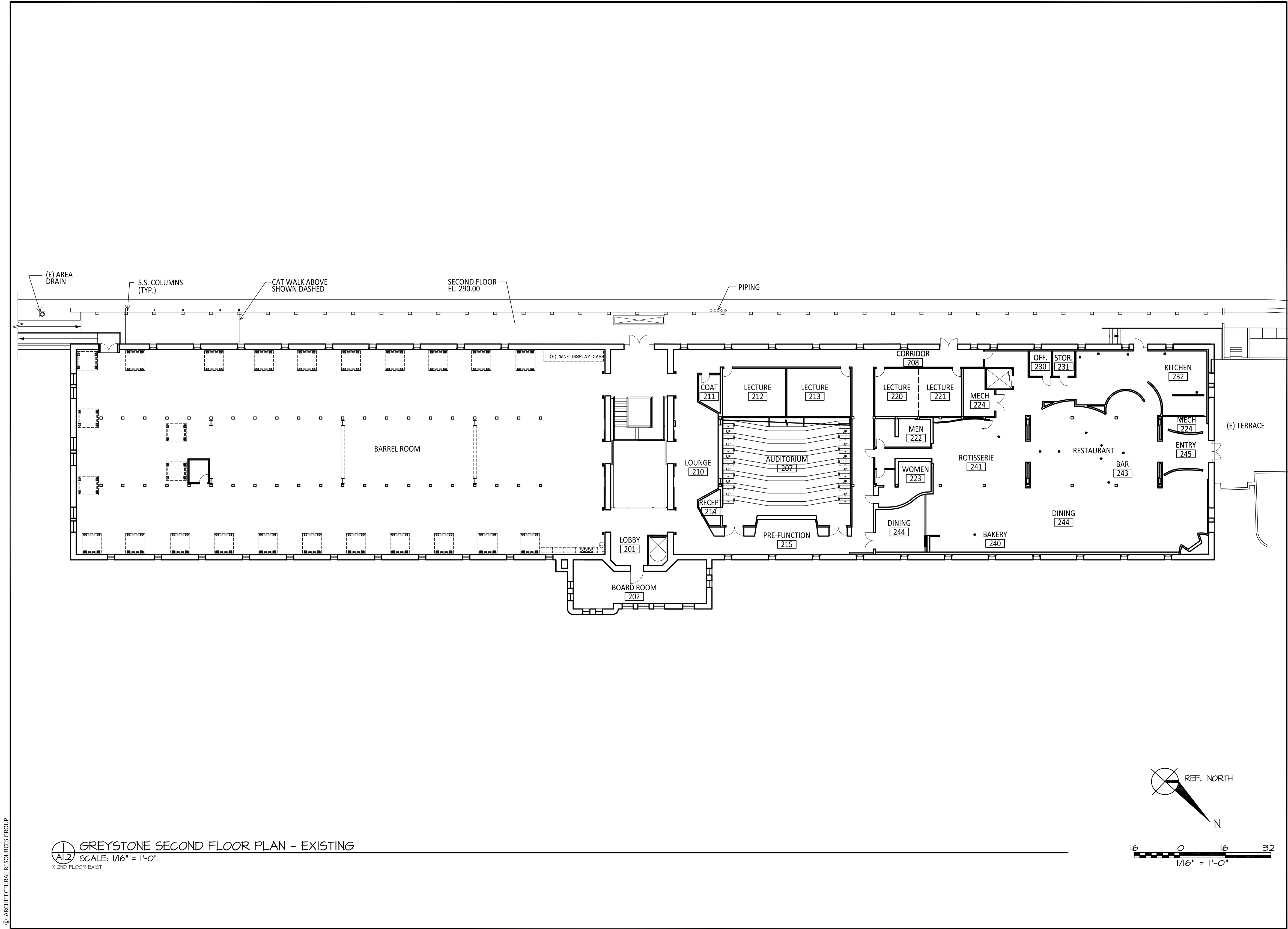
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**GREYSTONE FIRST FLOOR PLAN - EXISTING**  
SCALE: 1/16" = 1'-0"  
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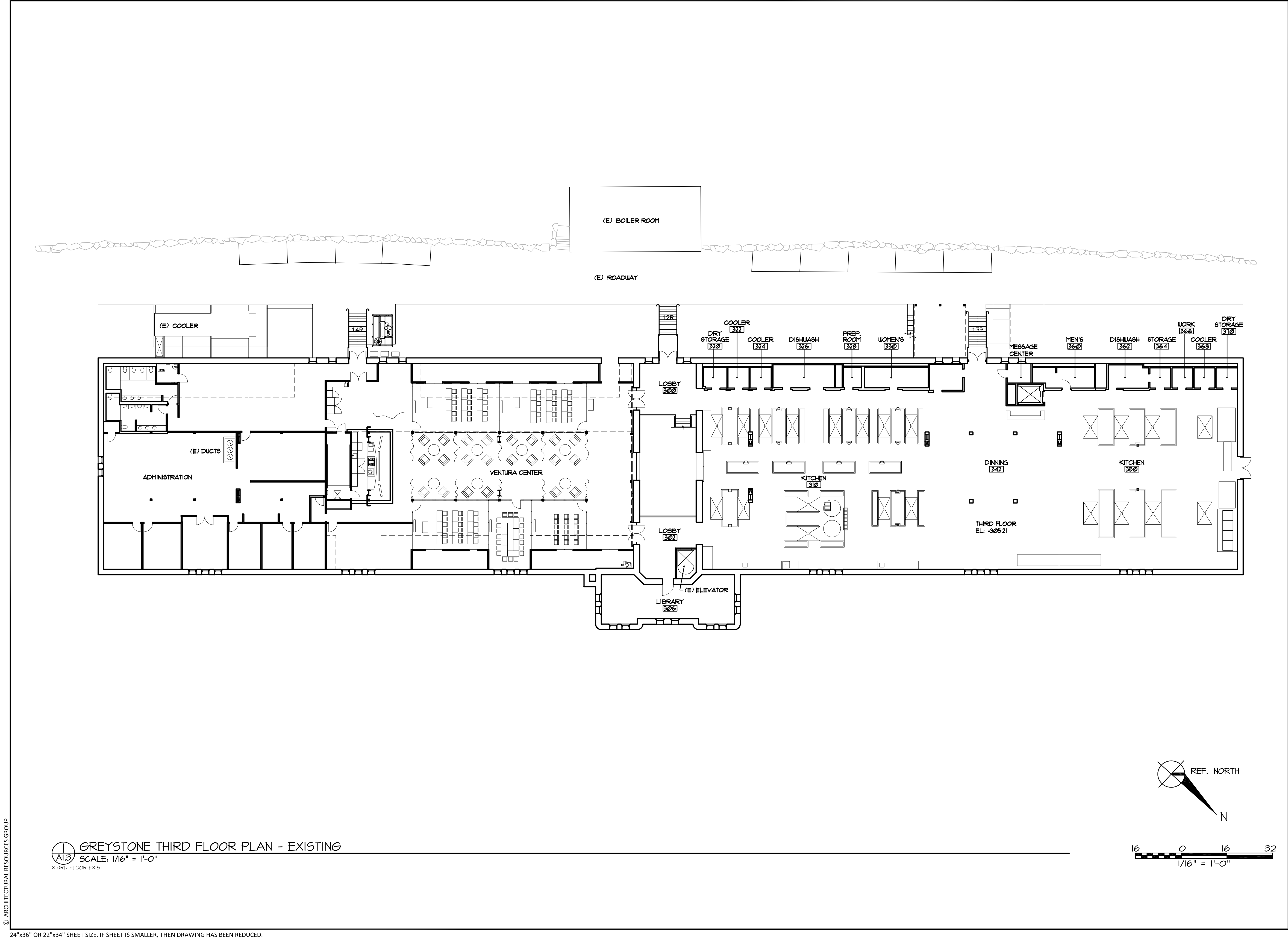
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SHEET TITLE  
**GREYSTONE  
THIRD FLOOR PLAN  
EXISTING**

USE PERMIT AND DESIGN REVIEW  
SUBMITTAL

**06/21/2016**

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SHEET TITLE  
**GREYSTONE  
FIRST FLOOR PLAN  
PROPOSED**

USE PERMIT AND DESIGN REVIEW  
SUBMITTAL

06/21/2016

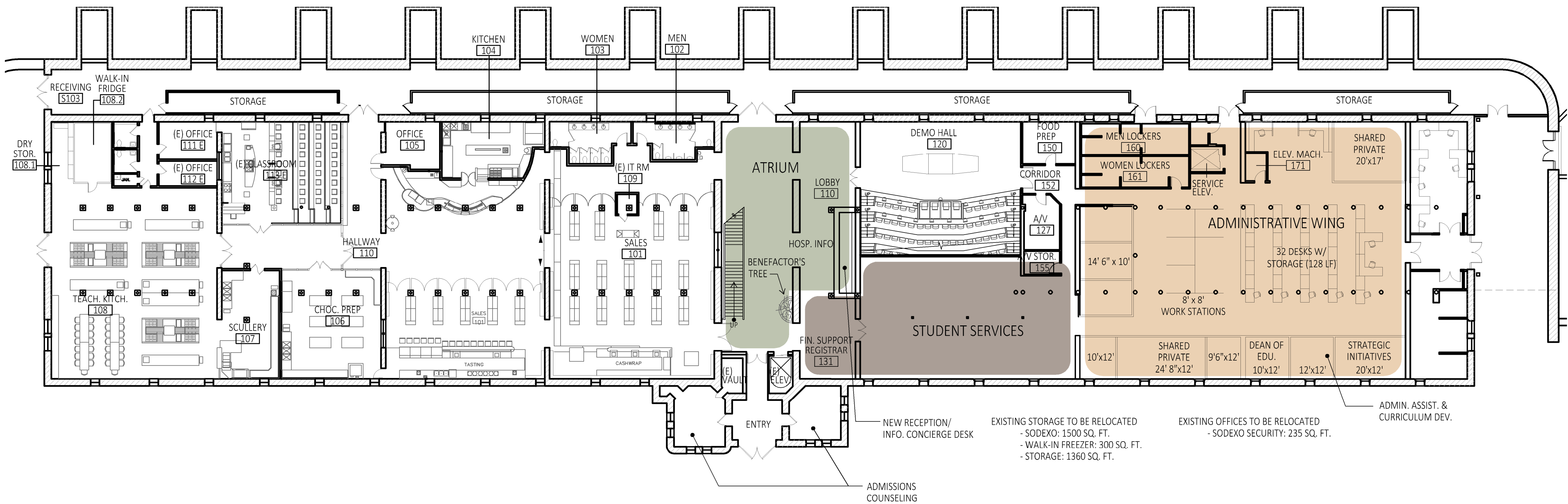
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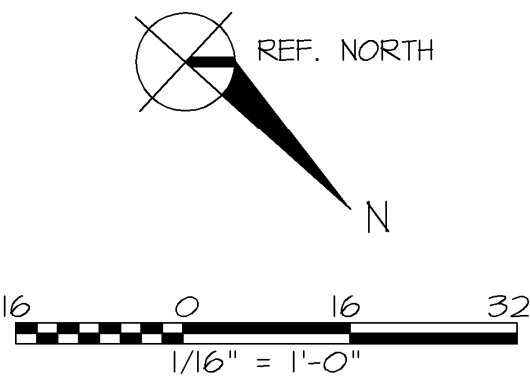
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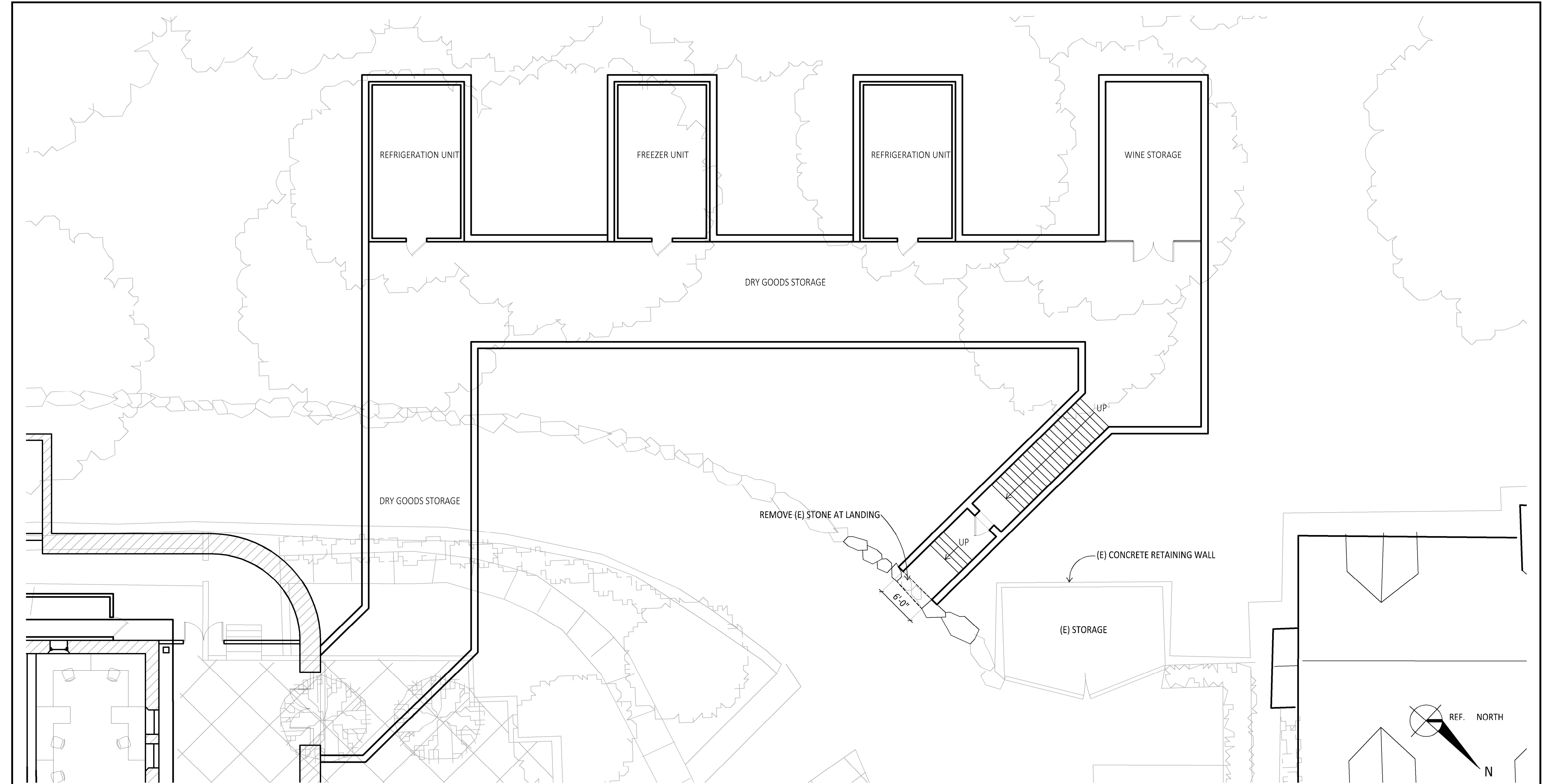
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SCALE: 1/16" = 1'-0"  
X 1ST FLOOR NEW



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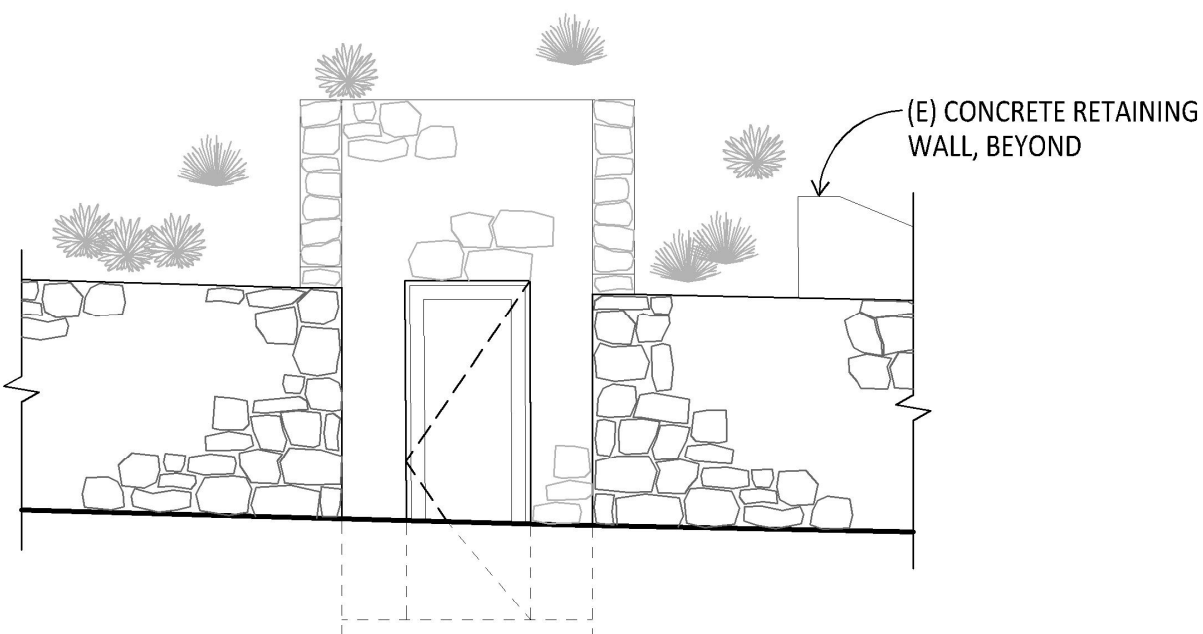




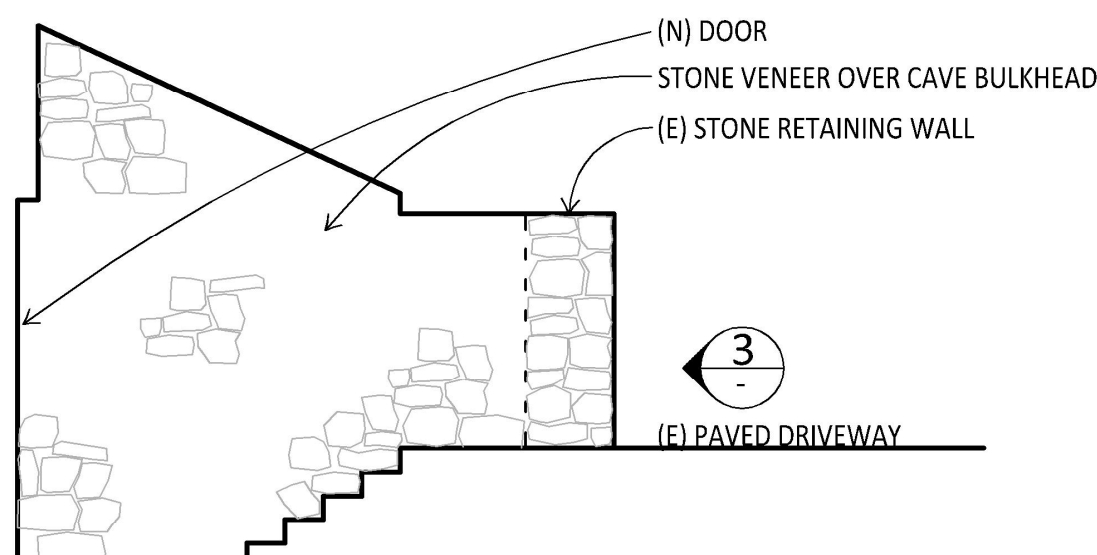
1 OVERALL CAVE PLAN  
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X:1ST FLOOR NEW.DWG



2 CAVE PORTAL EXISTING CONDITIONS



3 CAVE PORTAL EXTERIOR ELEVATION  
SCALE: 1/4" = 1'-0"  
X:SECTIONS.DWG



4 CAVE PORTAL EXTERIOR SECTION  
SCALE: 1/4" = 1'-0"  
X:SECTIONS.DWG



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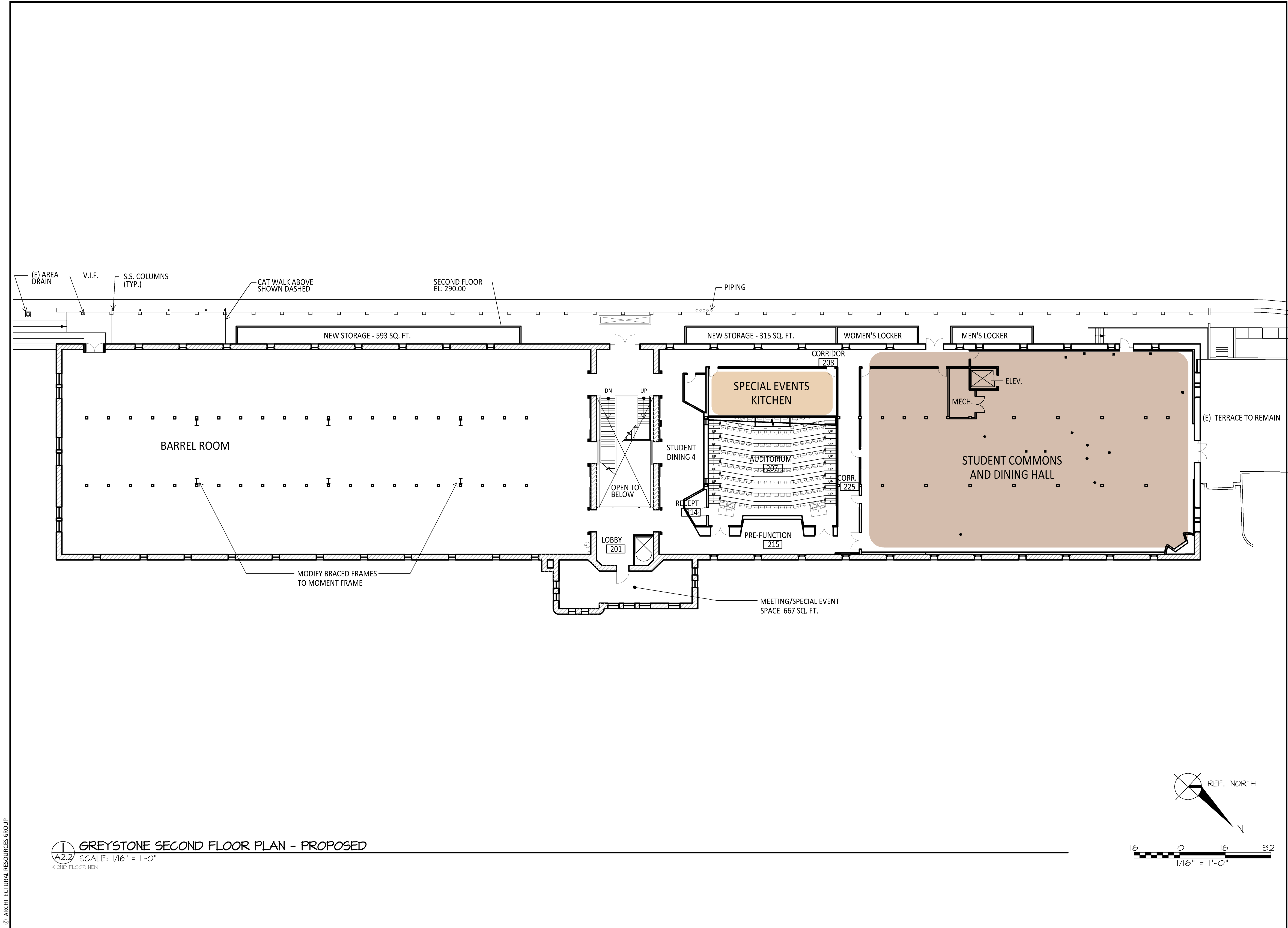
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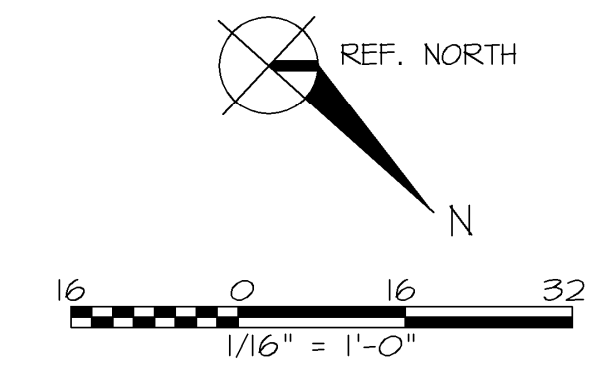
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SHEET OF





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**GREYSTONE SECOND FLOOR PLAN - PROPOSED**  
A2.2 SCALE: 1/16" = 1'-0"  
X 2ND FLOOR NEW





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SHEET TITLE  
**GREYSTONE  
SECOND FLOOR PLAN  
PROPOSED**

USE PERMIT AND DESIGN REVIEW  
SUBMITTAL

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**A2.2**

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SHEET TITLE  
**GREYSTONE  
THIRD FLOOR PLAN  
PROPOSED**

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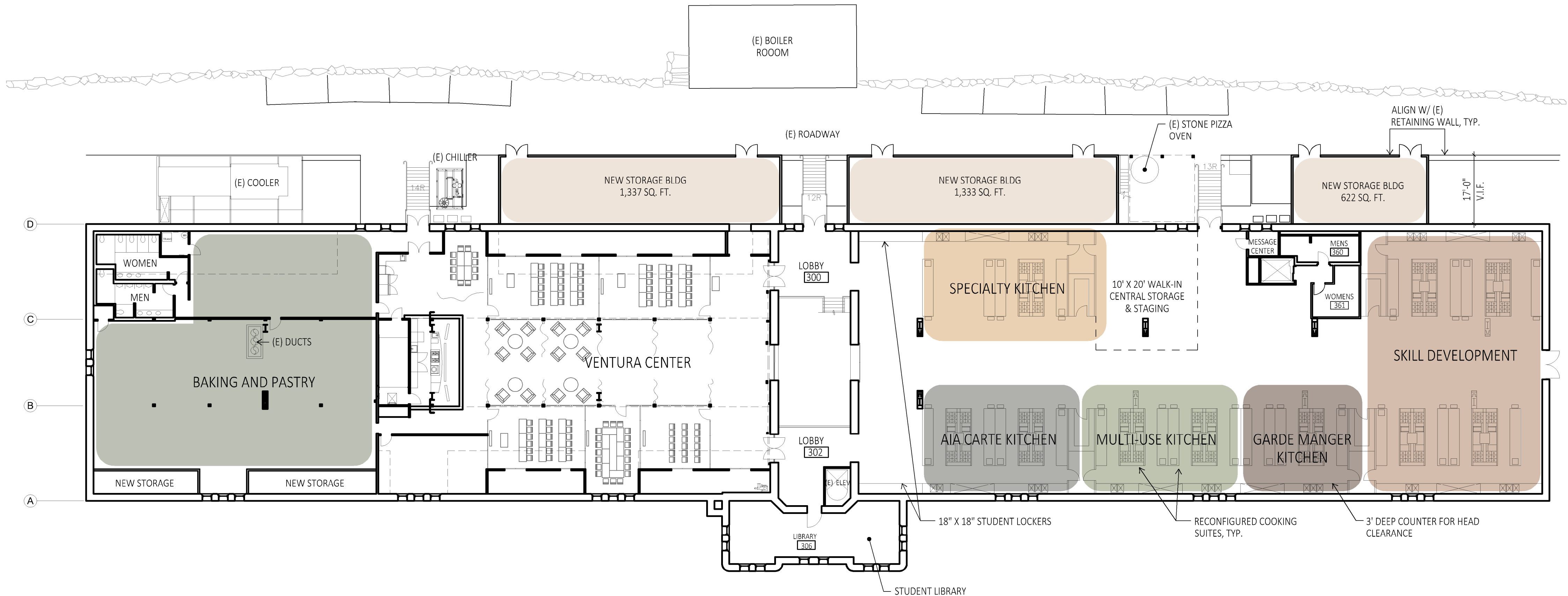
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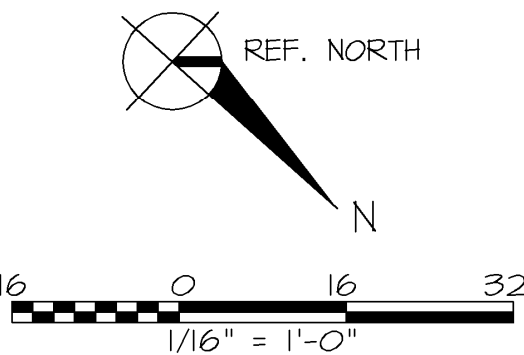
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**GREYSTONE THIRD FLOOR PLAN - PROPOSED**  
SCALE: 1/16" = 1'-0"  
X 3RD FLOOR NEW

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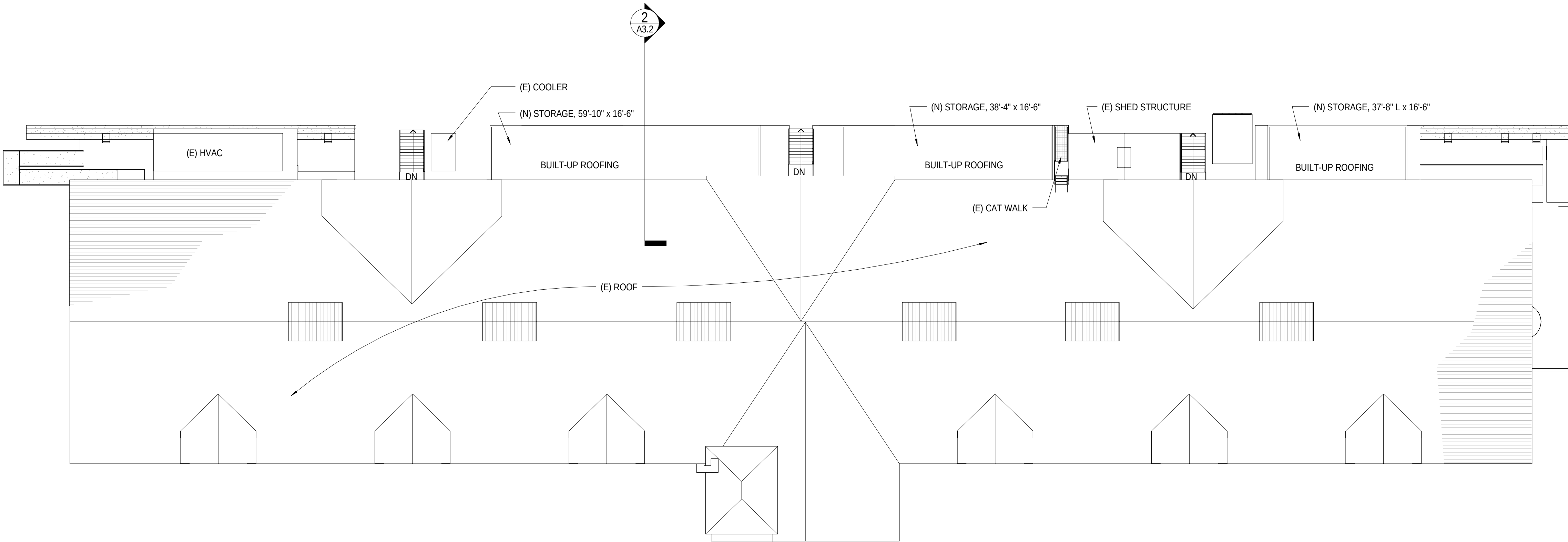
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SHEET TITLE  
GREYSTONE ROOF PLAN  
- PROPOSED

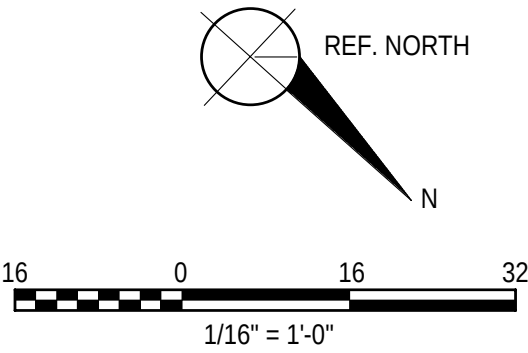
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A2.4



1 GREYSTONE ROOF PLAN - PROPOSED  
A2.4 1/16" = 1'-0"







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SHEET TITLE  
GREYSTONE EXISTING  
ELEVATIONS

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REVIEW SUBMITTAL

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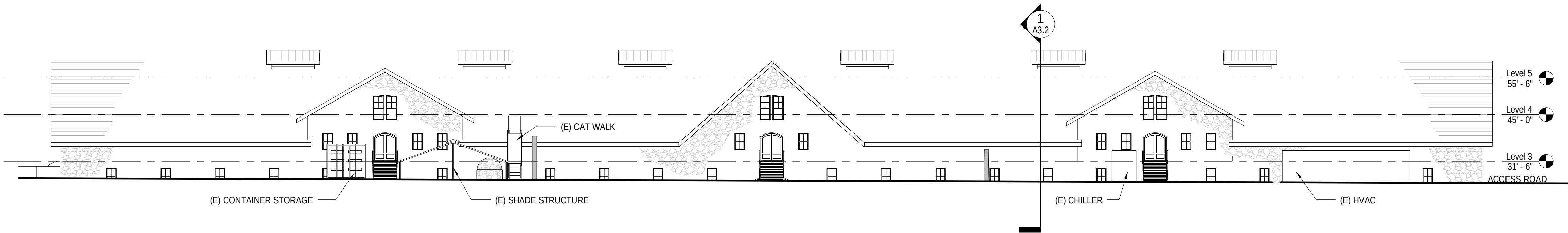
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A3.0



GREYSTONE WEST ELEVATION-

EXISTING

1

A3.0

1/16" = 1'-0"



GREYSTONE NORTH ELEVATION -

EXISTING

2

A3.0

1/16" = 1'-0"



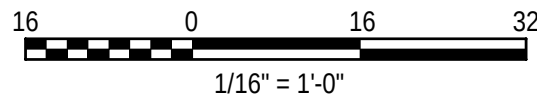
GREYSTONE SOUTH ELEVATION -

EXISTING

3

A3.0

1/16" = 1'-0"







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SHEET TITLE  
**GREYSTONE PROPOSED  
ELEVATIONS**

USE PERMIT AND DESIGN  
REVIEW SUBMITTAL

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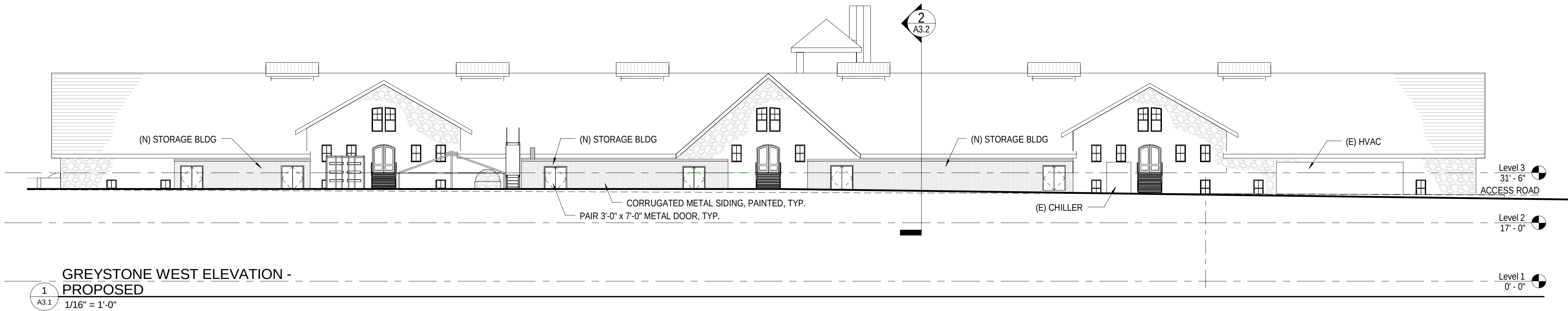
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Author

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DRAWING NO.

**A3.1**



**GREYSTONE WEST ELEVATION -  
PROPOSED**  
1  
A3.1  
1/16" = 1'-0"



**GREYSTONE NORTH ELEVATION -  
PROPOSED**  
2  
A3.1  
1/16" = 1'-0"



**GREYSTONE SOUTH ELEVATION -  
PROPOSED**  
3  
A3.1  
1/16" = 1'-0"

16 0 16 32  
1/16" = 1'-0"





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### SHEET TITLE SECTIONS

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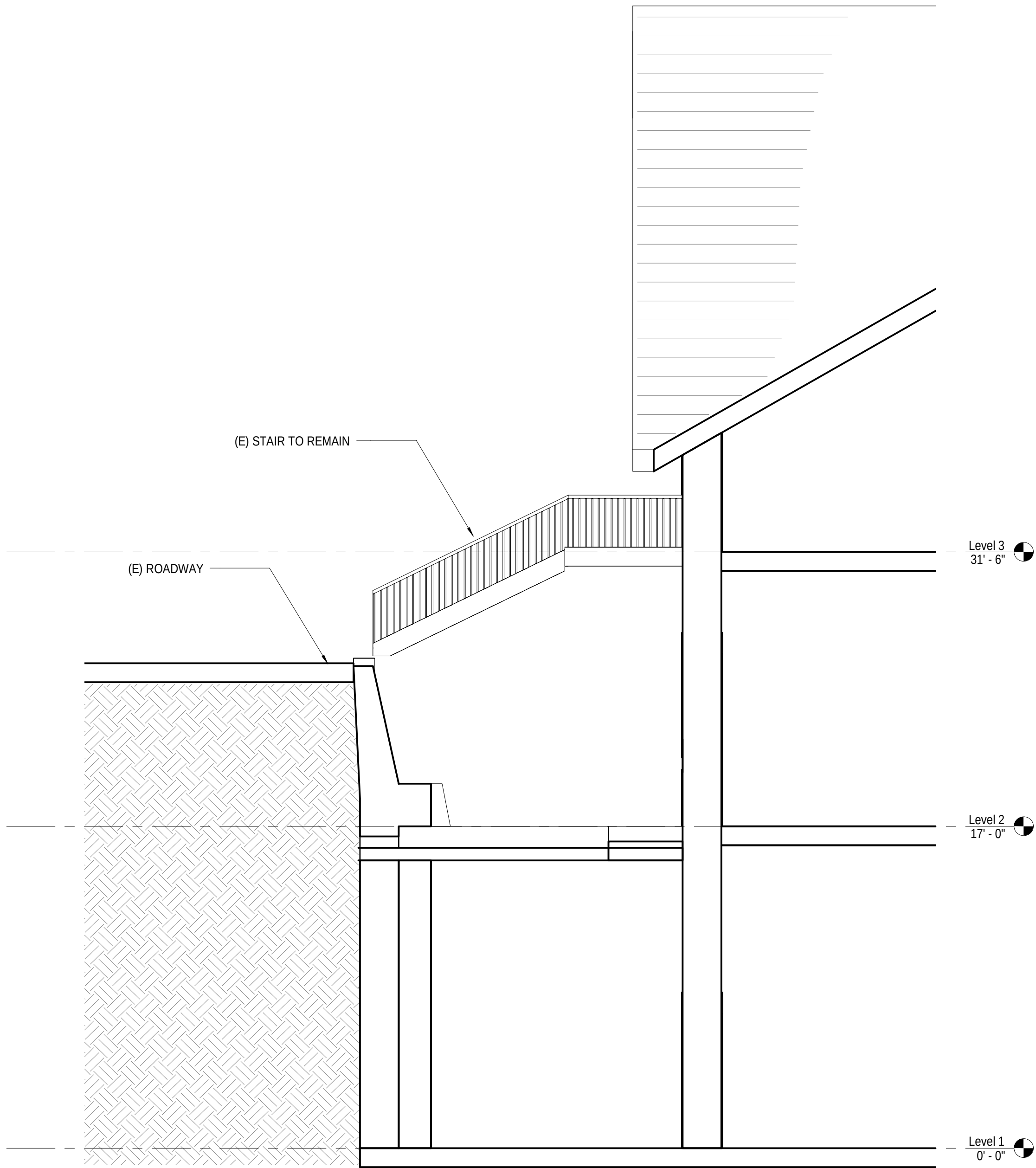
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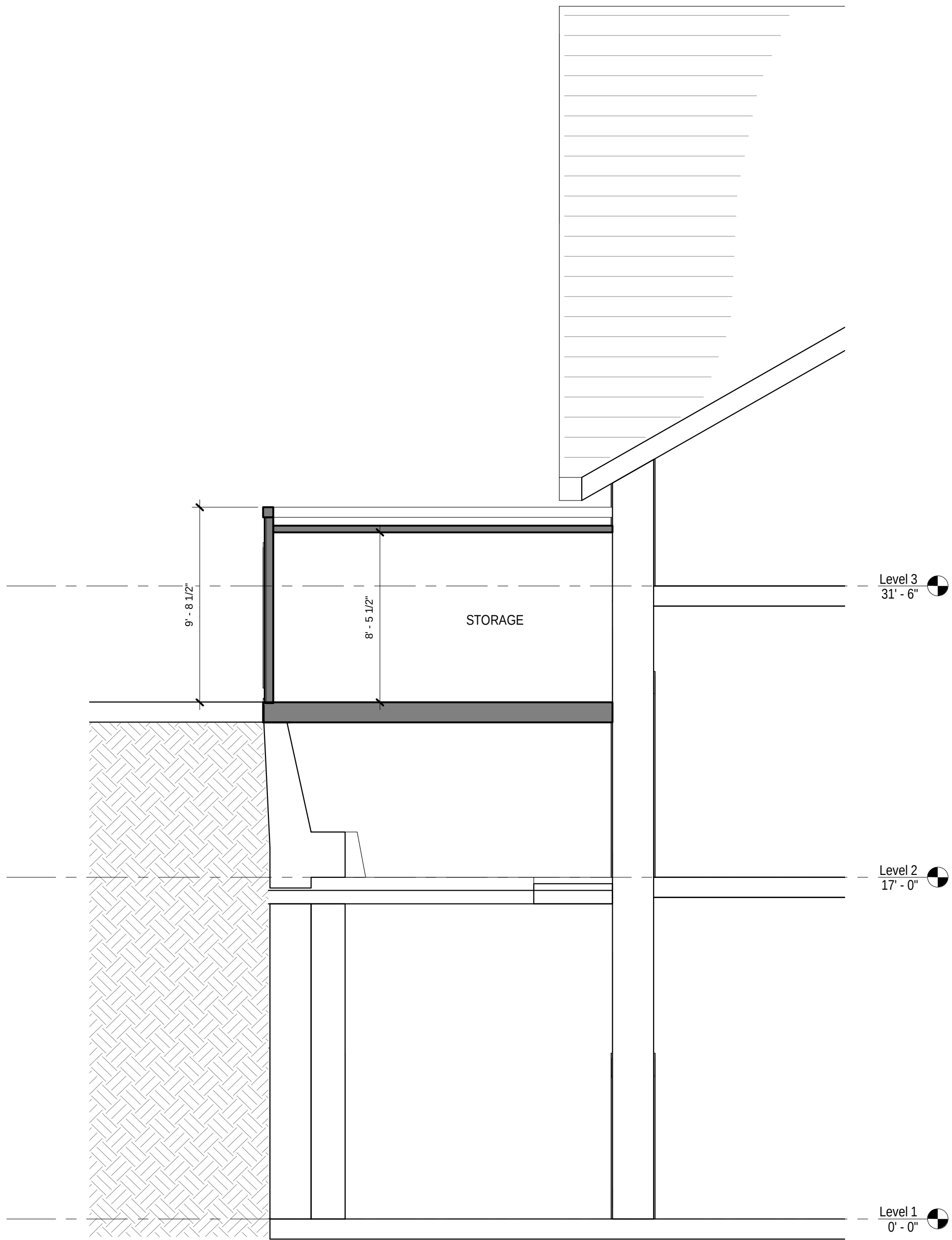
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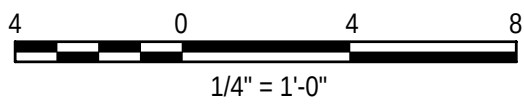
A3.2



1 SECTION AT EAVE - EXISTING  
A3.2 1/4" = 1'-0"



2 SECTION AT EAVE - PROPOSED  
A3.2 1/4" = 1'-0"







Attachment 7



# **Culinary Institute of America Campus Master Plan**

**Greystone Campus: 2555 Main Street  
Vineyard Lodge Housing: 830 Pratt Avenue**

---

## **Initial Study/Mitigated Negative Declaration**

**Noah Housh  
Planning and Community Improvement Director**

**December 9, 2016**

Culinary Institute of America at Greystone (PL16-042)  
 Vineyard Lodge Housing (PL16-043)  
 Initial Study and Mitigated Negative Declaration

December 9, 2016  
 Page 1 of 60

**City of St. Helena**  
**Planning Department**  
**1480 Main Street, St. Helena, CA 94574**  
**(707) 967-2792**

**INITIAL STUDY OF ENVIRONMENTAL SIGNIFICANCE**

**PROJECT NAME:** Culinary Institute of America (CIA) Campus Master Plan  
 2555 Main Street (Greystone Campus)  
 830 Pratt Avenue (Vineyard Lodge Housing Site)

**FILE NUMBER:** PL16-042 | 2555 Main Street “Greystone”  
 PL16-043 | 830 Pratt Avenue “Vineyard Lodge”

**SITE ADDRESS:** 2555 Main Street, St. Helena, California  
 830 Pratt Avenue, St. Helena, California

**APN:** 2555 Main Street: 009-131-003;  
 830 Pratt Avenue: 009-010-024

**GENERAL PLAN:** 2555 Main Street –Public; Quasi Public  
 830 Pratt Avenue- Agriculture

**ZONING:** 2555 Main Street- Winery, Planned Development, and Historic Preservation overlay.  
 830 Pratt Avenue- Public, Quasi-Public

**APPLICANT:** Culinary Institute of America  
 2555 Main Street  
 St Helena, CA 94574

**CONTACT:** Culinary Institute of America  
 Thomas Bensel, Managing Director  
 (707) 967-2310

**PROJECT DESCRIPTION:** The Culinary Institute of America (CIA) at Greystone is proposing a campus master plan to restructure and expand the educational facilities at the Greystone Campus (2555 Main Street) and expand student enrollment from 200 to 300 students. Also proposed is a 4,468 sf underground storage cave and the installation of three modular storage units at the rear of the building. Concurrently, student housing facilities (dormitories) at the Vineyard Lodge Housing Site (830 Pratt Avenue) will be expanded by 123 net new dorm rooms to accommodate a total of 224 residents. The applicant is requesting the following entitlements: Design Review, Use Permit(s), Demolition Permit, and Variance(s).

**PREVIOUS CEQA DOCUMENTS:**

2555 Main Street: The CIA Part I Environmental Impact Report, SCH 1992103004, Certified 1/11/93  
 830 Pratt Avenue: Vineyard Lodge Part II Mitigated Negative Declaration SCH No. 200806239, Certified 6/12/2008

## PROJECT DESCRIPTION

The Culinary Institute of America (CIA) Campus Master Plan is a proposal to restructure educational facilities at the CIA at Greystone while expanding enrollment from 200 to 300 students. Also proposed is a 4,468 sf underground storage cave and the installation of three modular storage units at the rear of the building. Concurrently, student housing facilities (dormitories) at the Vineyard Lodge Site (830 Pratt Avenue) will be expanded by 123 net new dorm rooms to accommodate a total of 224 residents. The project location consists of two discontinuous sites; the Greystone Campus at 2555 Main Street (APN. 009-131-003) and the Vineyard Lodge Housing site at 830 Pratt Avenue (APN 009-010-024). The two project sites are located approximately one-half mile from each other in northern St. Helena, approximately one mile north of Downtown St. Helena. **Table 1**, included at the end of the project description identifies the existing, proposed, and net changes resulting from the implementation of the proposed project.

The CIA acquired the Greystone property in 1993 to serve as a west coast branch of the Hyde Park CIA campus in New York. The CIA originally envisioned the campus at Greystone to operate as a continuing education facility, but it has since evolved to serve solely as an occupational educational facility offering an Associate in Occupational Studies (AOS) degree program. In 2004 the CIA acquired the Vineyard Lodge Housing site at 830 Pratt Avenue to support the trend towards occupational education and provide affordable housing for students. Consistent with the requirements of the City's Municipal Code, the subject sites currently have active use permits (93-105 for the Greystone Campus; 2004-33 for the Vineyard Lodge Housing site).

## EXISTING CONDITIONS

### Greystone:

The Greystone Campus exhibits a General Plan land use of Public Quasi Public and Zoning Designation of Winery, Planned Development; Historic Overlay (W:PD:H). While the Winery Zoning Designation is typically confined to winery related uses; the designation is modified by the PD Overlay thereby allowing uses which serve public objectives more fully than development permitted under conventional zoning regulations and authorized by a use permit. The site is comprised of an irregularly formed parcel of approximately 14.7 acres and which is characterized by improved land substantially surrounded by oak woodland. The site features four buildings that include (1) the Rudd Center, a continuing education facility for the "Semester Away Wine program," (2) The Flavor Discovery Center, a student run demonstration kitchen (3) Guest House, which provides housing for 47 students, and (4) the Greystone Cellars building which houses the balance of educational facilities and is the subject of the proposed project. The historic Greystone Cellars building was built in the Richardsonian Romanesque style and constructed in 1888 to serve as a cooperative winery. In 1978 the National Trust for Historic Preservation (NTHP) listed the property on the National Register of Historic Places (NRHP). The western half (rear portion) of the site is devoted to oak woodlands, sloping up from the project area and subject to an open space easement. Southwest of the site is the former Carpy property (APN 009-131-028) which is also owned by the CIA; the house on Carpy property is used for storage by the CIA. In general, the Greystone site is substantially surrounded by woodland immediately on the north, south, and west, and by vineyards to the east, beyond SR 29.

Vehicular access is provided via a single driveway connection with a 150-foot-long left turn lane in place on the northbound SR 29 intersection approach. Truck deliveries access the site via the main entrance. The trucks circulate through to the driveway at the Greystone Building entrance level, to the loading area at the north end of the building. The total supply of on-site parking is 265 spaces concentrated in two major parking lots adjacent to and in front of the Greystone building; there is on-site parking for employees and the general public, as well valet parking for a total of 60 vehicles, a loading and unloading area, and spaces for service vehicles. Handicapped-accessible spaces are distributed throughout the site to serve the individual buildings. Daily shuttle service is provided every 15 minutes between the Greystone Campus and Vineyard Lodge Housing site on weekdays between the hours of 6:45 a.m. and 9:00 p.m. by two shuttles with 14 and 22 seats, respectively.

The Greystone Campus operates as a culinary school with ancillary commercial uses that include a retail space, special events spaces, and the Wine Spectator at Greystone Restaurant. The Greystone campus currently supports 61 faculty and administrators and 200 students. The Restaurant, Café, Store and Food Enthusiast programs include 73 employees. The Wine Spectator at Greystone Restaurant is open 362 days per year with lunch and dinner service, and has seating for 190 people. The Campus holds

approximately 12 conferences per year, two 200 person special events per month, plus a varying number of small events throughout the year.

#### Vineyard Lodge:

The Vineyard Lodge Housing site is located approximately one-half mile southeast of the Greystone Campus property and is currently developed with dormitories and appurtenant parking. The project site is substantially surrounded by residential and agricultural land uses. The site is bounded by Vineyard Road to the northeast, Napa Valley Railroad right-of-way (ROW) to the west, and Pratt Avenue to the south; the site is surrounded by vineyards and wastewater treatment ponds to the north. Single family residential uses, permitted under the "Agricultural" zoning designation exist along Pratt Avenue, east and west of the site, but do not directly abut the project site. Medium-density residential uses are located to the southwest, across Pratt Avenue. At present, the site features two dormitory buildings, Vineyard Lodge I and Vineyard Lodge II, housing 41 and 60 residents, respectively. The northernmost one-third of the project site remains unimproved and features decomposed granite. Vineyard Lodge I (c.1960), formerly the Marlinda Convalescent Home, is a one-story 15,050 square foot building situated in the southernmost corner of the site. Vineyard Lodge II (c.2008) is a two-story 12,612 square foot building situated in the northern corner of the site. Vineyard Lodge I and II are separated by a small courtyard and paved parking lot with 85 spaces. The site features landscaping that includes a variety of trees and shrubs.

The Vineyard Lodge Housing site currently provides housing for 101 residents, including one on-site manager (41 residents in Vineyard Lodge I and 60 residents in Vineyard Lodge II) for 44 weeks per year (assumes eight weeks of vacation). The student housing is managed by the CIA, and is occupied exclusively by CIA students from the Greystone Campus and one resident manager. Rules and regulations for the residents are outlined in the orientation packet that is distributed at student orientation, and prohibit amplified music and impose a 9:30pm curfew for noise generated by students, amongst others. Resident Assistants in each dorm monitor student compliance with rules and regulations. Resident students are not allowed to park at the Greystone Campus; they must utilize the existing CIA shuttle service, bike or walk to and from the Vineyard Lodge Housing site and the Greystone Campus. At present, the CIA provides two shuttles of 14 and 22 seats that transport students between the Greystone Campus and Vineyard Lodge Housing site. The shuttles run at 15-minute intervals, five days a week, between the hours of 6:45am and 9:00pm.

The Vineyard Lodge housing site currently provides 85 parking spaces, all of which require a permit. With 101 residents, only 31 parking permits have been issued for on-site parking. In addition, the CIA operates an on demand car rental operation on-site where students can rent cars on an as needed basis. At present, vehicular access at the Vineyard Lodge Housing site is provided via two driveways off Pratt Avenue. A sidewalk is provided along the west side of Pratt Avenue at property frontage.

#### PROPOSED PROJECT

##### Greystone

The Master Plan involves an expansion in student enrollment from 200 to 300 students for a net increase of 100 new students, plus seven new instructional staff. Concurrently, 49 employees would relocate to the recently acquired American Center for Wine, Food & the Arts (Copia) in the City of Napa, California. The net change in student and faculty at the Greystone Campus would constitute a net increase of 58 students and staff. The project would restructure the interior uses at the Greystone Campus to better accommodate the focus on occupational education. The interior changes include improvements to the student dining commons, the introduction of new teaching kitchens, and a new special events kitchen. Also proposed is the closure of the 190 seat Wine Spectator at Greystone Restaurant (WSGR) and relocation of the CIA restaurant to the 58 seat Flavor Discovery Center, resulting in a net reduction in restaurant capacity of 132 seats. The restaurant at the Flavor Discovery Center will be student-run, and will serve meals five days a week for 36 weeks (180 days) per year as opposed to the WSGR which operated 362 days per year and served both lunch and dinner.

To accommodate wastewater flows generated by the educational facility, Greystone intends to continue utilizing the onsite primary treatment, including one 3,000 gallon grease interceptor, two 7,500 gallon settling tanks and one 6,000 gallon settling tank, and a pump sump and pump to convey the SS flows to the Markham Combined Wastewater System (MCWS) located at Markham Winery on Highway 29, north of St. Helena. Improvements to the existing dishwashing and other kitchen facilities, including replacement with more water and energy efficient equipment, in addition to the closure of the WSGR, would reduce the overall water and

wastewater demand for the site. Taken together, the proposed improvements will lead to a net decrease in flows conveyed and treated at the MCWS and would remain within the authorized discharge amount of 14,850 gpd.

The proposal further includes the construction of a 4,468-square-foot (sf) storage cave at the north end of the Greystone Cellars building, beneath the former WSGR. In addition, a series of three modular storage units ranging in size from approximately 592 sf to 944 sf would be installed at the rear of the third floor of the Greystone Cellars building. Given that the majority of works is confined to the interior of the building, exterior changes would be very limited. Any work that may affect the exterior of the historic Greystone Cellars building (i.e. modular units) would be installed in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties so as to avoid impacting the building's historic integrity.

The introduction of the storage cave would include constructing entry tunnels extending from two portals at the Greystone loading dock retaining wall. The loading dock retaining wall is a reinforced concrete wall over an older masonry retaining wall at the northwest end of the building. A reinforced concrete frame would be doweled to the loading dock wall face around the sides and top of the perimeters of the portals to improve the structural capacity of the wall (which will be compromised by making the portal openings). The frame would then be constructed before saw cutting and demolition.

The underground storage portals/entry would be created by saw-cutting the perimeter of the portal openings on the loading dock retaining wall, demolishing and removing the concrete within the saw cuts, exposing ground retained by the loading dock wall, and then mining the entry tunnels behind the openings. The portal openings would be 10 feet high and 10 feet wide. Cave construction would consist of excavating the tunnels using mechanical means (backhoe, milling head, and/or roadheader), and sequentially supporting the excavations with reinforced shotcrete. The tunnel floors would be cast-in-place reinforced concrete placed after completing the tunnel liner. Where underground utilities may conflict with the proposed tunnel excavations, they would be removed, and excavations made for removal would be backfilled before tunnel construction.

#### Vineyard Lodge

Project activities include the demolition of the 15,050 sf Vineyard Lodge I and the erection of three new residential building units:

Building A: 17,885 SF (70 beds)  
 Building B: 11,380 SF (52 beds)  
 Building C: 11, 380 (42 beds)

The new construction will be 40,645 sf, which equates to a net increase of 25,595 sf with the removal of Vineyard Lodge I. No changes will be made to Vineyard Lodge II (12,612 SF). Following completion of demolition and grading activities, infrastructure improvements and building foundations would be constructed and utilities, storm drains, and catch basins would be installed. All public utilities currently extend to the project site and as such, improvements would be limited to the installation of new laterals and tie-ins to connect the new buildings to the existing water, sewer, power, and gas services in place within Pratt Avenue. Wastewater will be generated by dormitory restrooms, showers, and common areas. The project will utilize the existing sanitary sewer (SS). Effluent would undergo primary treatment in septic tanks and then be conveyed to the municipal sewer system through the existing 3" SS. The SS management system will be resized to accommodate a peak daily wastewater flow of approximately 9,520 gallons per day (gpd) which equates to a projected net increase of 1,960 gpd over existing capacity.

The proposed Vineyard Lodges would range in height from 29'-0" to 40'-2" and exhibit a contemporary architectural style with Craftsman detailing. The three new buildings would be clustered on the most southerly one-third of the property and would contain 164 new beds primarily in single rooms, with some double units. Combined with the 60 beds in the existing Vineyard Lodge II, there will be a maximum occupancy of 224 residents on-site, which equates to a net increase of 123 students. Based on the current parking needs, the CIA proposes the retention of 72 spaces for the 224 occupants. Parking permits will continue to limit the total of number of student vehicles at Vineyard Lodge to approximately 31% of the residents or 69 spaces with 3 additional spaces allocated to three (3) on-demand rental cars. With relocation of vehicular access from Pratt to the Vineyard Road, exiting only is proposed from the southwest corner of the property onto Pratt Avenue. The majority of existing trees along the property frontage would also be retained.

Following project implementation, the CIA would continue to provide shuttles to transport students between the Greystone Campus and Vineyard Lodge Housing site and would add into the rotation a 32 seat shuttle to accommodate the increase in students. In all, the three shuttles would contain 32, 22, and 14 seats, respectively. The shuttles would continue to run at 15-minute intervals, five

days a week, between the hours of 6:45am and 9:00pm, resulting in no net increase in the number of shuttle *trips* between the two sites.

#### PROJECT PHASING

Construction activities at the respective project sites are expected to commence following issuance of entitlements and will be phased in a manner that limits disturbance to class schedules and curriculum and in accordance with the phasing plan, below:

|            |                     |                                                                           |
|------------|---------------------|---------------------------------------------------------------------------|
| Phase 1:   | Jan 2017 - Aug 2017 | Pratt Avenue Housing Building A,                                          |
| Phase 2:   | Mar 2017 - Sep 2017 | Greystone Cave, Modular Storage Units, and Administrative Reconfiguration |
| Phase 2.5: | Jun 2017 - Jan 2018 | Pratt Avenue Housing Building B and C                                     |
| Phase 3:   | Sep 2017 - Sep 2018 | Greystone Interior Remodel                                                |

#### WATER

The CIA Campus currently operates under two separate water agreements. The current water allotments authorized by the Agreements allocate an average of 15,900 gpd to Greystone and 4,750 gpd to the Vineyard Lodge Housing site. The total allotment across the two sites amounts to an average of 20,650 gpd or 23.1 acre feet (AF) per year. Under the CIA Campus Master Plan the applicant proposes to rescind the two separate agreements and adopt a new joint water agreement which would redistribute the gross water allotment across the two sites to accommodate the increase in housing at the Vineyard Lodge site while maintaining the existing water allotment of 23.1 AF per year.

##### Greystone

Under Resolution 2008-77, the City Council approved an amendment of the Water Agreement recorded as Document 2000-0021548 in the Official Records of Napa County authorizing that the Greystone Campus be allocated an average water use of 15,900 gallons per day (GPD). At present, interior fixtures, including the dishwashers and other kitchen facilities, do not meet current water efficiency requirements. The proposed renovation would eliminate the existing three separate dish washrooms, and replace them with a single dish room which would equate to a water savings of approximately 1,200,000 gallons per year. In addition, the Greystone Campus currently uses its on-site water well solely for landscaping needs while improvements are underway to upgrade the system for domestic water use as intended when the well was developed. As a part of the proposed project, the Greystone Campus would switch its landscaping irrigation needs to an existing well located on the adjacent Carpy property, and use its on-site well to supply domestic water, which would substantially replace the amount of water provided by the City. By using well water for landscape irrigation, relocating staff and programs to Copia, and reducing restaurant size and period of operation, the CIA expects to reduce water consumption to demand only 9,867 gpd.

##### Vineyard Lodge

Under Resolution 2008-77, the City Council approved an amendment of the Water Agreement, recorded as Document 2005-0033275 to authorize that the Vineyard Lodge Housing site be allocated 4,750 gpd to serve the current population of 101 residents. With the construction of three new dormitory buildings (123 net units) the water demand will increase to 10,783. Given that the Greystone Campus is expected to reduce water consumption by 2,080 gpd and to account for the increase in water usage at the Vineyard Lodge Housing site, the CIA is proposing to rescind the current Water Use Agreements and execute a joint Water Use Agreement such that the gross allocation of water will be re-allocated between the two sites as needed, but without any net increase in consumption. For a more detailed description of water usage see Hydrology Discussion.

**Table 1 CIA Campus Master Plan Net Changes**

| CATEGORY                   | EXISTING  | PROPOSED   | NET CHANGE |
|----------------------------|-----------|------------|------------|
| Employees                  | 134       | 92         | (42)       |
| Student Enrollment         | 200       | 300        | 100        |
| Student Facilities         |           |            |            |
| Greystone (Square Footage) | 98,297 sf | 105,007 sf | 6,710 sf   |
| No. of Beds Greystone      | 47        | 47         | None       |



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|                                                                                 |                  |                  |          |
|---------------------------------------------------------------------------------|------------------|------------------|----------|
| Vineyard Lodge (Square Footage)                                                 | 15,050           | 40,645           | 25,595** |
| No. of Beds Vineyard Lodge                                                      | 101              | 224              | 123 **   |
| Off-site                                                                        | N/A              | N/A              | N/A      |
| Parking Spaces Greystone                                                        | 265              | 265              | None     |
| Parking Spaces Vineyard Lodge                                                   | 85               | 72               | (13)     |
| Shuttle Capacity                                                                |                  |                  |          |
| Number of Shuttles                                                              | 3                | 3                | None     |
| Size of Shuttles                                                                | 14; 22; 32       | 14; 22; 32       | None     |
| Frequency of Trips                                                              | Every 15 minutes | Every 15 Minutes | None     |
| Rental Cars Available                                                           | 2                | 3                | 1        |
| *Negative amounts denoted in (red)<br>** Assumes demolition of Vineyard Lodge 1 |                  |                  |          |

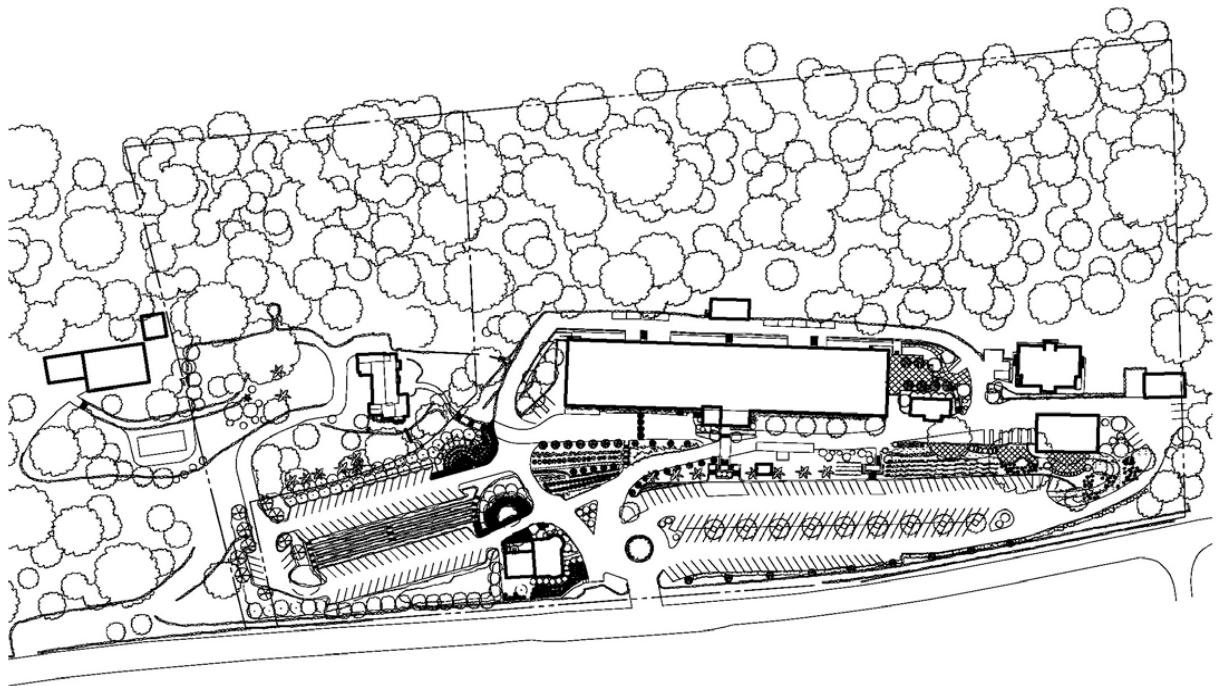


Figure 1 Greystone Campus Site Plan

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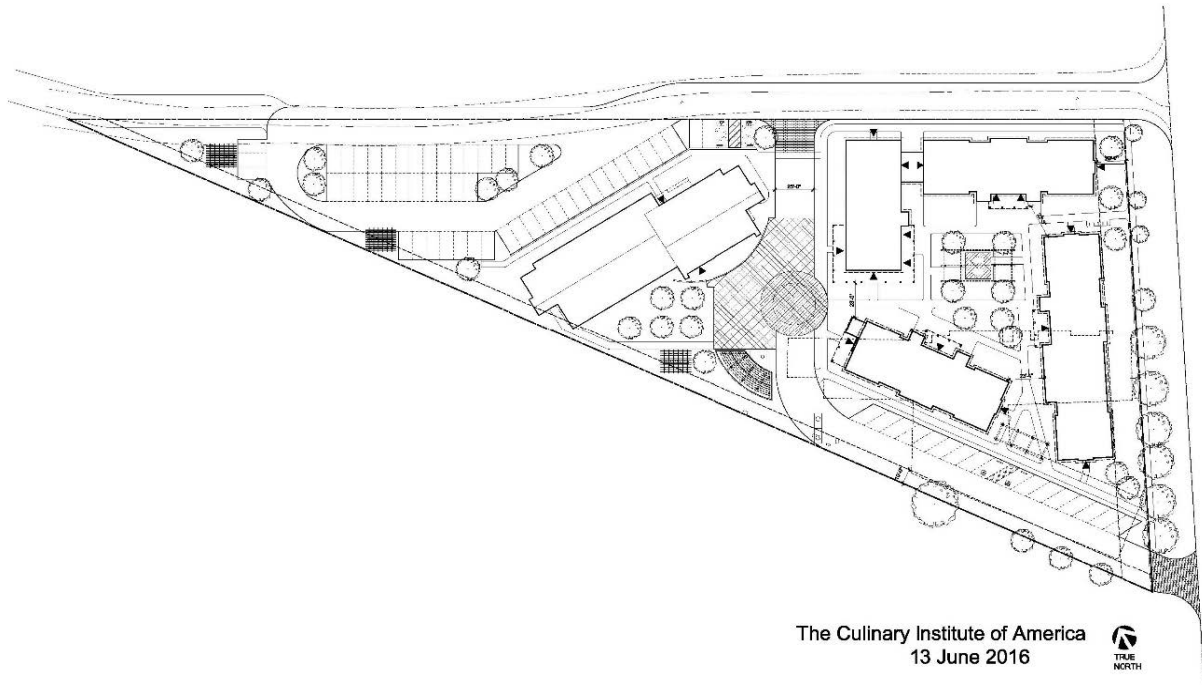


Figure 2 Vineyard Lodge Housing Site Plan



Figure 3 Aerial of Greystone Campus and Vineyard Lodge Housing Site

## ENVIRONMENTAL SETTING

The City of St. Helena is located in the northern end of the Napa Valley, approximately 18 miles northwest of the City of Napa and 65 miles north of San Francisco. Napa valley is a long narrow northwest trending alluvial plane flanked by the mountain ridges of the Mayacama and Vaca Mountain range to the east and west, respectively. The Napa River extends along the eastern portion of St. Helena and is fed by several tributaries within St. Helena, including Sulphur Springs Creek and York Creek which serve as year round tributaries to the river.

The City's incorporated boundaries comprise 3,285 acres or 5.1 square miles. The City of St. Helena is divided into two distinct areas: a developed "urban service area" and a more, rural, agricultural area located around the periphery such that the City exhibits a rather traditional landscape whereby commercial land uses are concentrated in the city center and along SR 29, with residential development radiating outwards to the northeast and southwest. The outer edge of the urban service area is demarcated by the urban limit line (ULL) which is a parcel specific boundary that marks the limit of allowed urban development. The intent of the ULL is to discourage urban sprawl and promote sensitive development which preserves the rural and agricultural lands around the City.

The project involves two discontiguous sites: the Greystone Campus at 2555 Main (APN. 009-131-003) and the Vineyard Lodge Housing Site at 830 Pratt (APN 009-010-024). The two sites are located approximately one half mile from each other and connected via Main Street (SR 29) and Pratt Avenue. The Greystone site is located within in the boundaries of the ULL, whereas the Vineyard Lodge Housing Site, is located just outside of, but abutting, the ULL. The Greystone Campus at 2555 Main is located on the west side of Main Street (SR 29) in northern St. Helena. The 14.7-acre site is situated at the western edge of the valley surrounded to the north, south and west by oak woodlands and to the east, across Main Street/SR 29, by vineyards. Parcels to the south of the site support residential and agriculture (viticultural) uses. The site historically served agricultural uses as a cooperative winery. At present the site supports institutional and ancillary commercial uses associated with the Culinary Institute of America. The site is improved with four buildings and appurtenant parking.

The Vineyard Lodge Housing site at 830 Pratt Avenue is located in the middle of the valley floor and on the north side of Pratt Avenue; approximately one-quarter mile from Main Street(SR 29). The site features a 2.61-acre triangular shaped lot located on the north side of Pratt Avenue, adjacent to the Napa Valley Wine Train railroad right-of-way (ROW), and west of Vineyard Rd; beyond which the site is bounded by vineyard on all sides. There are residences located along both sides of Pratt Avenue to the east and west, but none directly adjacent to the site. Historically, the site served agricultural purposes, but was developed with a convalescent home in the 1960s. Since 2004, it has served as student housing for CIA students. At present, the site is relatively flat with urban/ruderal habitat. It is partially developed with a one story residential building at the southwest corner of the property and a two-story residential building (C.2008) in the middle one third; the northernmost corner remains unimproved.

## GENERAL PLAN AND ZONING

The City of St. Helena General Plan provides the vision for the community's natural and built environment through a series of goals and policies. To ensure that this desired vision is realized, the General Plan has been designed to be internally consistent and cross-referenced with other documents, including the City's Zoning Ordinance which guides, controls and regulates future growth and development in a sound and orderly manner. The Greystone Campus exhibits a General Plan Land Use Designation of Public Quasi Public, whereas the Vineyard Lodge Housing site exhibits a land use designation of Agriculture, providing for agricultural uses, wineries, single-family residences, and public and quasi-public uses.

The City of St. Helena Zoning Ordinance implements the goals and policies of the General Plan. Several different districts are identified in the Zoning Ordinance that are intended to, among other things, provide for a wide range of uses and enhance the community's vision to preserve, protect and enhance its unique character and quality of life. The Greystone Campus site is zoned as W; Winery with HP: Historic Preservation and PD: Planned Development overlays. The Vineyard Lodge site is zoned PQP: Public Quasi-Public.

## REQUIRED DISCRETIONARY ACTIONS

### Greystone Campus site (2555 Main Street):

- Use permit to authorize reconfiguration of interior uses and expand student enrollment by 100 students
- Design Review for exterior modifications
- Rescission of water use agreement (Document No. 2000-0021548)
- Adoption of new joint water use agreement

### Vineyard Lodge Housing site (830 Pratt Avenue):

- Use permit to authorize three new dormitory buildings (net increase of 123 new beds)
- Design Review to construct student housing
- Demolition permit to demolish Vineyard Lodge I
- Variance to allow for a lesser setback from Pratt Avenue as required under Municipal Code Section 17.112.050
- Rescission of water use agreement (Document 2005-0033275)
- Adoption of new joint water use agreement

## OTHER PUBLIC AGENCY REVIEW

There are no responsible or trustee agencies which have jurisdiction over a portion of whole of the project.

## DOCUMENTS INCORPORATED BY REFERENCE

CEQA Guidelines Section 15150 recognizes the desirability of reducing the volume of documentation necessary for environmental review and authorizes incorporation by reference any portion of relevant documents that provide general background to the environmental document. As such, this Initial Study incorporates the following documents, which were reviewed as part of the analysis of certain topical sections provided herein:

1. City of St. Helena, 1993 General Plan; and
2. City of St. Helena, Zoning Ordinance, as amended.

Additional documents not reflected in this section are identified and analyzed within the Initial Study. These documents are available for review at the City of St. Helena Planning Department, 1480 Main Street, St. Helena, CA 94574 (707) 967-2792.

## PURPOSE OF INITIAL STUDY

The fundamental premise, on which CEQA is based, is that environmental protection can be achieved through informing decision-makers and the public about a project's potential environmental effects and identifying ways to reduce them. As a public disclosure document, an Initial Study must identify all effects on the environment resulting from a project and indicate the manner in which these effects can be mitigated or avoided to a less-than-significant level. Where it is uncertain that a significant effect on the environment may occur, or where a significant effect is found to exist but cannot be mitigated to a less-than-significant level, an Environmental Impact Report (EIR) must be prepared.

## ENVIRONMENTAL PROCEDURES AND CHECKLIST

This Initial Study presents a preliminary evaluation of the potential environmental impacts resulting from the project. The Initial Study was prepared in accordance with the California Environmental Quality Act (Public Resources Code Section 21000-21178.1) and the Guidelines for Implementation of the California Environmental Quality Act (Chapter 3, Title 14, California Code of Regulations (*CEQA Guidelines*)). This Initial Study considers all aspects of the proposed project, as required by Section 15063(a) (1) of the CEQA Guidelines<sup>1</sup>.

<sup>1</sup> Section 15063(a) (1) of the CEQA Guidelines requires that all phases of project planning, implementation, and operation must be considered in the Initial Study of the project.

The Environmental Checklist provided below, as contained in Appendix G of the CEQA Guidelines, was utilized to focus this Initial Study on the environmental factors that may be impacted or further impacted by implementation of the proposed project. Following each of the topical areas presented in the Environmental Checklist, a brief discussion is presented regarding the topical environment setting, the relevance of the proposed project to the topical environment setting, any and all potential impacts within the topical area and, as appropriate, any mitigation measures necessary to reduce potentially significant impacts to a less-than-significant level.

#### SUMMARY OF ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below identify "Potentially Significant Impacts" affected by this project, as indicated by the checklist on the following pages. However, as demonstrated in this Initial Study in the applicable topical sections, mitigations are proposed for incorporation into the project that will reduce or eliminate these impacts to "Less Than Significant" or "No Impact."

|                                                          |                                                                        |                                                            |
|----------------------------------------------------------|------------------------------------------------------------------------|------------------------------------------------------------|
| <input checked="" type="checkbox"/> Aesthetics           | <input type="checkbox"/> Agricultural and Forestry Resources           | <input checked="" type="checkbox"/> Air Quality/GHG        |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources                 | <input checked="" type="checkbox"/> Geology/Soils          |
| <input type="checkbox"/> Hazards & Hazardous Materials   | <input type="checkbox"/> Hydrology/Water Quality                       | <input checked="" type="checkbox"/> Land Use/Planning      |
| <input type="checkbox"/> Mineral Resources               | <input checked="" type="checkbox"/> Noise                              | <input type="checkbox"/> Population/Housing                |
| <input type="checkbox"/> Public Services                 | <input type="checkbox"/> Recreation                                    | <input checked="" type="checkbox"/> Transportation/Traffic |
| <input type="checkbox"/> Utilities/Service Systems       | <input checked="" type="checkbox"/> Mandatory Findings of Significance |                                                            |

#### DETERMINATION:

Based on information found in this initial evaluation, the City of St. Helena finds that:

- ☐ The proposed project COULD NOT have a significant effect on the environment and a NEGATIVE DECLARATION will be prepared.
- ☒ Although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because revisions in the project have been made or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ The proposed project MAY have a significant effect(s) on the environment, but at least one effect: 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards; and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets, if the effect is a "potentially significant impact" or "potentially significant unless mitigated." An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ Although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Culinary Institute of America at Greystone (PL16-042)  
Vineyard Lodge Housing (PL16-043)  
Initial Study and Mitigated Negative Declaration

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\_\_\_\_\_  
Noah Housh, Planning and Community Improvement Director  
City of St. Helena

12/8/2016  
Date: December 2, 2016

  
\_\_\_\_\_  
Project Applicant

12/2/16  
Date: December 2, 2016



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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|----------------------------------------------------|------------------------------------|------------------|
| <b>1. AESTHETICS. Would the project:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                      |                                                    |                                    |                  |
| a. Have a substantial adverse effect on a scenic vista?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                      | ✓                                                  |                                    |                  |
| b. Substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                      |                                                    |                                    | ✓                |
| c. Substantially degrade the existing visual character or quality of the site and its surroundings?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                      | ✓                                                  |                                    |                  |
| d. Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                      |                                                    |                                    | ✓                |
| Sources: 1993 St. Helena General Plan; General Plan EIR; Project plans date stamped September 2, 2016; California Scenic Highway Mapping System, accessed Aug 30, 2016; Visual Impact Assessment prepared by ARG, Aug 17, 2016; Secretary of the Interior's Standards Consistency Analysis Letter, prepared by ARG, August 14, 2016.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                      |                                                    |                                    |                  |
| <p><u>Setting</u></p> <p>The City of St. Helena is situated in the relatively narrow valley floor and framed by wooded foothills of the Mayacama and Vaca Mountain ranges located to the east and west, respectively. The valley floor undulates to the north and exhibits a gradual rise in elevation in a northerly direction of approximately 362 Feet above sea level which provides for the occasional interruptions in the vistas as viewed from the City. Foothills are readily visible from most locations in the flatland areas of the City, particularly from east/west oriented streets.</p> <p>Natural features that contribute to the distinct character of St. Helena include Sulphur Creek, York Creek, the Napa River, and oak and bay wooded hillsides located at the north end of St. Helena and at the base of Howell Mountain Road, east of the Napa River. Agricultural land uses, primarily viticulture, account for approximately 48 percent of the city's land use. As such, the vineyards serve as dynamic visual features and are central in defining the visual character of the City. The long established urban form within the City limits contrasts with the surrounding natural and agricultural features and provides for a distinct visual character. Notable visual features include distinctive architecture, tree lined streets, and the interspersed vineyards.</p> <p>The Greystone property is located on the west side of Highway 29 and features the historic Greystone Cellars (c.1888) a masonry building designed in the Richardsonian Romanesque architectural style. The Greystone property is highly visible and situated at the northern gateway to the City. Exterior modifications proposed for the Greystone building are limited to the introduction of a 4,468 square foot storage cave, which will be accessed from the loading dock retaining wall and not readily visible from the primary elevations, and the introduction of three modular storage units at the building rear which would be accessed via the existing roadway. The modular units will range in size from 592 sf to 944 sf and measure approximately 9'8" in height. The units will be located at the rear of the west elevation and supported on new structures that span across the existing exterior breezeway in a similar manner as the support structures used for HVAC units. The units will sit below the existing roof eave and will be utilitarian in nature and feature painted metal siding and doors with a flat roof shielded by a small parapet.</p> <p>The Vineyard Lodge site is a relatively flat, triangular lot located east of State Highway 29 and at the northern border of St. Helena and outside of the urban limits where medium density housing transitions to agricultural land uses to the north and east. It is comprised of 2.61 acres and improved with student housing (dormitories) associated with the CIA Greystone Campus. The site is substantially surrounded on all sides by agricultural land uses. Specifically, the site is bounded by Vineyard Road to the east, Pratt Avenue to the south, and the railroad right of way to the west. Current site improvements include two residential structures (Vineyard Lodge I and II) amenities, and parking. Vineyard Lodge 1 (constructed c.1960), is</p> |                                                      |                                                    |                                    |                  |

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| <p>a single story, 15,050 sf residential complex situated on the southerly one third of the site exhibiting frontage on Pratt Avenue. In the northerly portion of the site is Vineyard Lodge II (const.2008), a two story, 12,612 square foot residential building. The most northerly one third of the site is unimproved and vacant.</p> <p>The proposed project includes removal of Vineyard Lodge I and construction of three (3) new dormitory buildings to be situated in the southerly corner of the site and configured around a central courtyard. The three new residential structures will exhibit a combined gross square footage of 40,645 sf and will house a maximum of 164 students.</p> <p><u>Impact Analysis:</u></p> <p>a, c <b>(Scenic Vistas; Visual Character) Less than significant with Mitigation:</b> A scenic vista is defined as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. The City has not identified any specific vistas, but rather states that the sense of a strong connection to the surrounding agricultural open space and hillsides should be preserved in the future and that views of Vineyards, hillsides, creeks and major landscape features should be maintained.</p> <p>To assess the project’s potential impacts to scenic vistas a Visual Impact Assessment was prepared by consultants, Architectural Resources Group (ARG). To account for the City’s strong agricultural character, the consultant used the Bureau of Land Management (BLM) methodology which attributes numerical ratings to the existing conditions and project build out conditions, as they relate to the presence of seven key landscape components that include landform, vegetation, water, color, adjacent scenery, scarcity, and cultural modifications. Projects that create a high level of contrast to the existing visual character of a project setting are more likely to generate adverse visual impacts due to the inherent visual compatibility. Conversely, projects that create a low level of contrast to the existing visual character are less likely to generate adverse visual impacts due to inherent visual compatibility.</p> <p>On this basis, projects impacts to the seven landscape components were assessed based on eight view sheds: two long distant viewpoints (SV1 and SV2) that assessed potential impacts from Hwy 29 at Pratt Avenue, an eligible (but undesignated) scenic highway, and the CIA at Greystone, a historic resource with a view of the project site and six viewpoints (VP1-VP6) along Pratt Avenue to assess impacts to nearby residential viewers. The visual simulation evaluated visual modifications to the foreground, midground, and background views. Shown below is a visual showing the site’s appearance before and after the new construction.</p> |                                                      |                                                    |                                    |                  |
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| <p>Figure 4 View no. 4 (Pratt Ave. looking northeast) existing view.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                      |                                                    |                                    |                  |

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| <div></div> <p><b>Figure 5 View no. 4 (Pratt Ave. looking northeast) after proposed project.</b></p> <p>The Vineyard Lodge Site will endure more substantial changes to the visual environment relative to the Greystone Campus, but given that the Vineyard Lodge site is already developed with student housing; the proposed project will not deviate significantly from the existing condition. At present, the site features two buildings, Vineyard Lodge I, a horizontally oriented building constructed c.1960 and Vineyard Lodge II, a contemporary two-story building, constructed in 2008. The project will demolish Vineyard Lodge I and construct three new dormitories ranging in size from 11,380sf to 17,885sf, for total new construction of 40,645 sf. The dormitories will exhibit a maximum height of 40'2" and be stepped to reduce the visual prominence.</p> <p>Scenic Quality Rating scores for viewpoints VP2, VP3, VP5, and SV1 and SV2, indicate the proposed project does not measurably alter the viewer's perception of the environment when seen from Highway 29 and Pratt Avenue intersection, as well as from the CIA at Greystone and in some viewpoints along Pratt Avenue. In instances where the post project simulation indicates a greater level of visual change (i.e. VP1, VP4, and VP6) whereby residents and other viewer groups may experience reduced visual quality, those changes are expected to be alleviated by increasing the amount of landscaping within the setback along Pratt Avenue. To ensure adequate screening, the applicant shall comply with <b>Mitigation Measure AES-1</b> that requires the Planning and Community Improvement Director review and approve the final landscape plan so as to establish concurrence that the level of screening provided is consistent with that illustrated in approved plans and continues to be sufficient to reduce and soften the visual impact of new construction. Further, the landscape and building design, including materials and color selections, were devised to limit the visual prominence of the buildings and to be more consistent with the existing residential character and blend into the surrounding land features. Accordingly, with the natural color palette, stepped design, retention of existing trees adjacent to the public right-of-way and the addition of proposed new trees, and with compliance to <b>Mitigation Measure AES-1</b> the visual change is greatly minimized. As such, with mitigation, impacts to the visual environment associated with the Vineyard Lodge Site are expected to be less than significant.</p> <p>The proposed site modifications at the Greystone property are located at the rear and interior portions of existing buildings such that they will not generate any impacts to the visual character of the site. As such, any impacts to potential scenic vistas and the existing visual character are expected to be less than significant.</p> <p>b. <b>(Scenic Resources) No Impact:</b> In 1963 the California legislature established the California Scenic Highway Program with the purpose of preserving the character of scenic highways and protecting them from changes that could diminish the</p> |                                                      |                                                    |                                    |                  |

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| <p>aesthetic value of adjacent lands. According to the California Scenic Highway Mapping System, State Route Highway 29, is considered eligible for listing, but is not officially designated. Further, the 1993 St. Helena General Plan established the goal of obtaining scenic route designation for SR 29. The CIA campus at Greystone exhibits frontage on SR 29; however, given the limited number of exterior modifications and that those modifications are confined to less visible areas of the site, project activities proposed for 2555 Main would not be expected to impact a designated (or eligible) state scenic Highway. As stated above, project activities at 830 Pratt are not expected to depart significantly from the existing visual setting and will further be screened by the introduction of trees and vegetation. As such, the project is not expected to substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings viewable from a designated (or eligible) State scenic highway. No impacts are expected.</p> <p>d. <b>(Light and Glare) No Impact:</b> The project would introduce site lighting to the Vineyard Lodge site. In order to prevent light pollution and/or glare onto adjacent properties and roadways, the project must comply with St. Helena Municipal Code provision 17.68.060(F) which requires that all exterior lighting be directed or shielded so as to prevent glare onto any public roadways and properties of residential character. Further, proposed landscaping will screen the site from the adjacent properties and roadways to further obscure and/or filter light and glare. Finally, exterior parking lot (pole mounted) lights are limited to a maximum height of 15-feet. With adherence to these uniformly applied development standards, including Municipal Code provision 17.68.060(F) and with the introduction of landscaping as delineated on project plans, no lighting impacts are expected.</p> <p><b>Mitigation Measures.</b> None Required.</p> <p>AES-1. The final Landscape Plan and proposed vegetative screening shall be subject to review and approval by the Planning and Community Improvement Director prior to issuance of building permit so as to confirm consistency with approved plans.</p> |                                                      |                                                    |                                    |                  |
| <b>2. AGRICULTURAL &amp; FORESTRY RESOURCES.</b> <i>Would the project:</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                      |                                                    |                                    |                  |
| a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                      |                                                    | ✓                                  |                  |
| b. Conflict with existing zoning for agricultural use or a Williamson Act Contract?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                      |                                                    | ✓                                  |                  |
| c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                      |                                                    |                                    | ✓                |
| d. Result in the loss of forest land or conversion of forest land to non-forest use?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                      |                                                    |                                    | ✓                |
| e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to a non-agricultural use or conversion of forest land to a non-forest use?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                      |                                                    |                                    | ✓                |
| Sources: St Helena General Plan: Open Space and Conservation Element (6-1), (6-3); California Department of Conservation Farmland Mapping and Monitoring Program; California Department of Conservation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                      |                                                    |                                    |                  |
| <b>Agricultural Setting:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                      |                                                    |                                    |                  |

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| <p>Agriculture remains a dominant land use in St. Helena and the greater Napa County. Located within the northern portion of the Napa Valley; the majority of the City's land is located on the valley floor, where soils, weather, and water resources are conducive to viticulture. Viticulture serves as the most prolific agricultural use and requires relatively large parcels in contrast to other land uses in St. Helena. According to the 1993 General Plan, agricultural land comprises 48% of the incorporated area, and of that total, the majority of acres are actively cultivated with vineyards. According to California's Farmland Mapping &amp; Monitoring Program (FMMP), St. Helena supports 966 acres of "Prime Farmland," 284 acres of "Farmland of Statewide Importance," 53 acres of "Unique Farmland," and 23 acres of "Farmland of Local Importance." The City of St. Helena promotes the retention of agricultural activities and discourages encroachment into agricultural lands through the application of land use designations directed to maintain large parcels for agricultural use and limiting residential and commercial development to within the Urban Limit Line (ULL) and to parcels already designated for such uses.</p> <p>Neither of the project sites (Greystone Campus or the Vineyard Lodge Housing Site) directly support any agricultural uses and do not exhibit any farmland designation. However, the Vineyard Lodge Housing site is bounded by prime farmland to the north, east, and west. Forested lands within St Helena are generally confined to hillside lands found to the east and west of its commercial and residential center. The Greystone Site is nearly fifty percent (50%) forested land and has been identified as important by California's Department of Conservation. The western half of the Greystone Site contains deciduous oak and mixed oak woodlands within its boundaries. The Vineyard Lodge Housing Site is not located in the vicinity of any forest lands.</p> <p><u>Impact Analysis</u></p> <p>a-b. <b>(Agricultural) Less than Significant:</b> The proposed project will not directly impact any prime farmland, unique farmland, or farmland of statewide importance. The Vineyard Lodge Housing site is contiguous to active agriculture lands devoted to viticulture. However, the proposed project improvements at the Vineyard Lodge Housing site are permitted under the PQP zoning, and do not physically create an impediment to continued agricultural use of surrounding properties. Further, pursuant to St. Helena Municipal Code, property owners within the PQP Zoning District are required to recognize that there exists a right-to-farm properties within the district and in the vicinity of the district. There is a good faith expectation that no complaints will occur regarding legal normal agricultural activities on properties in the district or in the vicinity of the district. This applies to activities that may involve disbursement of chemicals, and creation of dust, noise, or fumes. Given that the project will not directly impact any agricultural lands and through recognition and acceptance of the neighbor's right to farm pursuant to the Municipal Code and as required by condition of approval, the project will not indirectly impact any agricultural lands and any impacts will be less than significant.</p> <p>c-e. <b>(Forestry) No Impact:</b> The proposed project on the Greystone Site is located in an area of previously developed land downhill and separated from the deciduous oak and mixed oak forest resources at the rear of the site. No forest resources are located within the Vineyard Lodge project area. The proposed project at the Greystone Site and the Vineyard Lodge sites will not result in damage, reduction or removal of forested lands. The City of St. Helena does not support any active "timberlands," meaning "land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees. Accordingly, no impacts are expected.</p> <p><b>Mitigation Measures:</b> None Required.</p> |                                                      |                                                    |                                    |                  |
| <p><b>3. AIR QUALITY &amp; GREENHOUSE GAS EMISSIONS. [Significance criteria established by the BAAQMD may be relied upon to make the following determinations] Would the project:</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                      |                                                    |                                    |                  |
| a. Conflict with or obstruct implementation of the applicable air quality plan?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                      |                                                    |                                    | ✓                |
| b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                      |                                                    | ✓                                  |                  |

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| c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                      |                                                    | ✓                                  |                  |
| d. Expose sensitive receptors to substantial pollutant concentrations?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                      | ✓                                                  |                                    |                  |
| e. Create objectionable odors affecting a substantial number of people?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                      |                                                    | ✓                                  |                  |
| f. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment or conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                      |                                                    | ✓                                  |                  |
| <p>Sources: 1993 St. Helena General Plan; General Plan EIR; Culinary Institute of America 830 Pratt GHG Emissions Analysis, Prepared by Gilleran Energy, September 16,2016;; Culinary Institute of America Greystone Rehabilitation GHG Emission Analysis, prepared by Gilleran Energy, September 18,2016; 2010 BAAQMD Guidelines</p> <p><u>Setting:</u></p> <p>The City of St. Helena is located within the San Francisco Bay Area air basin regulated by the Bay Area Air Quality Management District (BAAQMD). Air quality within the Bay Area Air Basin is affected by natural geographical and meteorological conditions as well as human activities such as construction and development, operation of vehicles, industry and manufacturing, and other anthropogenic emission sources. The Federal Clean Air Act and the California Clean Air Act establish national and state ambient air quality standards respectively. The BAAQMD is responsible for planning, implementing, and enforcing air quality standards within the Bay Area Air Basin, including the City of St. Helena.</p> <p>The Bay Area Air Basin is designated as non-attainment for both the one-hour and eight-hour state ozone standards; 0.09 parts per million (ppm) and 0.070 ppm, respectively. The Bay Area Air Basin is also in non-attainment for the PM10 and PM2.5 state standards, which require an annual arithmetic mean (AAM) of less than 20 µg/m3 for PM10 and less than 12 µg/m3 for PM2.5. In addition, the Basin is designated as non-attainment for the national 24-hour fine particulate matter (PM2.5) standard and will be required to prepare a State Implementation Plan (SIP) for PM2.5. All other national ambient air quality standards within the Bay Area Air Basin are in attainment.</p> <p>This Initial Study applies the BAAQMD's California Environmental Quality Act – Air Quality Guidelines, May 2012, including the BAAQMD thresholds of significance adopted in June 2010. In March 2012, the Alameda County Superior Court ordered BAAQMD to set aside use of the significance thresholds within the BAAQMD CEQA Guidelines until they complete an assessment of the environmental effects of the thresholds in accordance with CEQA. The Court found that the thresholds, themselves, constitute a “project” for which environmental review is required. Lead agencies may continue to rely on the BAAQMD CEQA Guidelines, “for assistance in calculating air pollution emissions, obtaining information regarding the health impacts of air pollutants, and identifying potential mitigation measures.”</p> <p>The BAAQMD CEQA Guidelines include the best available scientific data and most conservative thresholds available. Comparison of the project's emissions against the BAAQMD thresholds provides a conservative assessment as the basis for a determination of significance. In the absence of other applicable thresholds, the City of St. Helena, as lead agency, has chosen to utilize the June 2010 BAAQMD thresholds and May 2011 Guidelines as a means to conservatively assess the project's potential environmental effects to air quality. BAAQMD air quality thresholds are presented in <b>Table 2</b> below.</p> |                                                      |                                                    |                                    |                  |



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|--|---------------------------------------------|-------------------------------------------|------------------------------|---------------|
|  | Potentially Significant Impact, Unmitigated | Potentially Significant Impact, Mitigated | Less Than Significant Impact | No New Impact |
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|-------------------------------------------------|----------------------------------------------------------------|-------------------------------------------------|
| Table 2. Air Quality Thresholds of Significance |                                                                |                                                 |
| Pollutant                                       | Construction Thresholds (lbs. per day)                         | Operational Threshold (lbs. per day)            |
| ROG                                             | 54                                                             | 54                                              |
| NO <sub>x</sub>                                 | 54                                                             | 54                                              |
| PM <sub>10</sub>                                | 82                                                             | 82                                              |
| PM <sub>25</sub>                                | 54                                                             | 54                                              |
| CO                                              | Not Applicable                                                 | 9.0 ppm (8-hour avg.) or 20.0 ppm (1-hour avg.) |
| Fugitive Dust                                   | Construction Dust Ordinance or other Best Management Practices | Not Applicable                                  |
| Source: BAAQMD’s CEQA Guidelines: May 2011.     |                                                                |                                                 |

Impact Analysis

a.(Air Quality Plan) No Impact: The BAAQMD adopted the Bay Area 2010 Clean Air Plan (CAP) in September 2010 to comply with state air quality planning requirements set forth in the California Health & Safety Code. The 2010 CAP serves to update the 2005 Ozone Strategy and provides control strategies to address air quality pollutants including ozone (O3), Particulate Matter (PM), toxic air contaminants (TACs), and greenhouse gases (GHGs). A total of 55 control strategies have been developed as part of the CAP for land use, energy and climate, stationary sources, transportation, and mobile sources. Control strategies are designed to reduce emissions of ozone precursors, PM, air toxics, greenhouse gases, and work towards attainment of state ozone standards, reduce transport of ozone to neighboring basins, and to protect public health and the climate. Measures to implement control strategies include the use of clean and efficient vehicles, Green Construction Fleets, enhanced bicycle and pedestrian access, energy efficiency, and others. The primary goals of the CAP include attainment of air quality standards, reductions in population exposure and protection of public health in the Bay Area and reduction in greenhouse gas emissions.

The BAAQMD CEQA Guidelines set forth criteria for determining consistency with the CAP. In general a project is considered consistent if a) the project supports the primary goals of the CAP, b) includes control measures and c) does not interfere with the implementation of CAP measures. The CIA Master Campus Plan is consistent with the CAP as it supports the primary goals by providing alternative (shuttle) transportation, would provide housing in close proximity to complimentary uses, and will feature efficient fixtures, amongst other things. Further, the project includes basic control measures, and would not result in any conflicts in implementing the CAP. In addition, the Bay Area 2010 CAP was based on land use and growth projections consistent with those used in the St. Helena General Plan. The project’s land use and development intensity is consistent with that assumed by the General Plan for the project including both the Greystone and the Vineyard Lodge sites. There are no other control measures of the 2010 CAP that apply to the project. As such, the project will not conflict with or obstruct implementation of the Bay Area 2010 Clean Air Plan. Therefore, the project would have no impacts due to a conflict with the regional Air Quality Plan.

b. (Air Quality Standard, Criteria Pollutant) Less Than Significant: Air quality emissions associated with the proposed project would result from short-term construction activities and ongoing operation. BAAQMD Guidelines, as adopted in 2010 include “screening criteria” that provide a conservative estimate above which a project would be considered to have a potentially significant impact to air quality. Projects that are below the screening criteria threshold are reasonably expected to result in less than significant impacts to air quality since pollutant emissions would be minimal. Additionally, when projects fall below the screening criteria levels, a quantitative analysis of the project’s air quality emissions is not required.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Potentially Significant Impact, Unmitigated | Potentially Significant Impact, Mitigated | Less Than Significant Impact | No New Impact |               |                            |                             |                                  |              |              |
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| Air quality emissions of carbon monoxide (CO), ozone precursors (ROG and NOx) and particulate matter (PM <sub>10</sub> and PM <sub>2.5</sub> ) from construction and operation are evaluated pursuant to the 2010 CEQA Guidelines. There is no carbon monoxide (CO) emissions threshold applicable to construction emissions. For carbon monoxide (CO), the operational significance threshold is 9.0 particles per minute (8-hour average) and 20.0 ppm (1-hour average). The screening level criteria for a mid-rise apartment development (i.e. dormitories) are shown in <b>Table 3</b> below.                                                                                                                                                                                                                                                                                                                                                   |                                             |                                           |                              |               |               |                            |                             |                                  |              |              |
| <p style="text-align: center;"><b>Table 3</b><br/><b>BAAQMD Screening Criteria for Mid Rise Apartment ( Dormitories)</b></p> <table><tr><th>Land Use Type</th><th>Operational Screening Size</th><th>Construction Screening Size</th></tr><tr><td>Mid Rise Apartment (Dormitories)</td><td>494 du (ROG)</td><td>240 du (ROG)</td></tr></table> <p>Source: Table 3-1, pg. 3-2 Bay Area Air Quality Management District 2010 CEQA Guidelines, May 2010.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                             |                                           |                              |               | Land Use Type | Operational Screening Size | Construction Screening Size | Mid Rise Apartment (Dormitories) | 494 du (ROG) | 240 du (ROG) |
| Land Use Type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Operational Screening Size                  | Construction Screening Size               |                              |               |               |                            |                             |                                  |              |              |
| Mid Rise Apartment (Dormitories)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 494 du (ROG)                                | 240 du (ROG)                              |                              |               |               |                            |                             |                                  |              |              |
| Construction activities may result in air quality emissions generated by the use of heavy-duty construction equipment, trenching, transport of materials, and workers commuting to and from the project site(s). <b>Table 3</b> above shows that the screening level to determine significant air quality impacts from construction of a mid-rise apartment development (dormitories) is 240 dwelling units. The Greystone Master Plan proposes the development of 164 or a net of 123 new dormitories, which falls well below the screening level. Therefore, construction activities associated with the Vineyard Lodge expansion would have a less than significant impact to air quality.                                                                                                                                                                                                                                                        |                                             |                                           |                              |               |               |                            |                             |                                  |              |              |
| At operation, the proposed Greystone Master Plan will continue to function in a similar manner as the existing condition, with a minor expansion of use. The Greystone component will have negligible change relative to the existing condition, whereas the Vineyard Lodge component will result in an increase of 123 new dormitories. Although there are no new stationary “point sources” created (large emitters such as manufacturing plants), the project will include small individual “area sources” such as residential furnaces, water heaters and consumer products such as solvents, cleaners, and paints. Most area source emissions generated onsite would come from the consumption of natural gas associated with the dormitories. Air quality emissions will also be generated during the operation of vehicles (mobile sources). To a much lesser extent onsite landscaping maintenance will also generate air quality emissions. |                                             |                                           |                              |               |               |                            |                             |                                  |              |              |
| <b>Table 3</b> above indicates that the operational project level screening size for mid- rise apartments (dormitories) is 494 dwelling units. As the proposed project will exhibit a net increase in dwelling units of 123 units, the project remains well below the established screening size for operational emissions. At operation, the CIA Campus Master Plan Project will not violate any air quality standard or result in a cumulatively considerable net increase of any criteria pollutant in non-attainment, namely O3, PM10, and/or PM2.5. Therefore, air quality emissions generated by the proposed project will result in less than significant impacts.                                                                                                                                                                                                                                                                            |                                             |                                           |                              |               |               |                            |                             |                                  |              |              |
| <b>d. (Sensitive Receptors) Less than Significant Impact with Mitigation:</b> The BAAQMD defines sensitive receptors as “facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly and people with illnesses.” Sensitive receptors may include schools, hospitals or residential areas. In St. Helena, sensitive receptors include residential land uses, elementary, junior and high schools, and hospitals, care facilities and convalescent homes. The nearest sensitive receptors are located onsite at both the Greystone and the Vineyard lodge components house students. Due to the proximity of sensitive receptors onsite, the project has the potential to generate temporary air quality impacts associated with fugitive dust emissions during construction activities.                                                            |                                             |                                           |                              |               |               |                            |                             |                                  |              |              |
| In order to ensure that fugitive dust emissions are reduced to levels below significance <b>Mitigation Measure AQ-1</b> shall be implemented. AQ-1 is set forth pursuant to BAAQMD Basic Control Strategies and requires covering haul trucks, watering during active ground disturbance, limiting idling time, proper maintenance of equipment, and other standard measures. With implementation of AQ-1 potential impacts to sensitive receptors during construction will be reduced to levels below significance.                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                             |                                           |                              |               |               |                            |                             |                                  |              |              |

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| <p>At operation the project would not generate emissions that would impact sensitive receptors. As a proposed dormitory facility, air quality emissions generated on the Vineyard Lodge Housing site at operation would be minimal and similar to emissions generated by surrounding residential development. At operation of the Greystone site, activities will be similar the existing conditions and would not impact sensitive receptors residing onsite. Therefore, potential impacts related to exposure of sensitive receptors to pollutants at operation of the proposed project will remain below levels of significance.</p> <p>e. <b>(Odors) Less Than Significant Impact:</b> The proposed CIA Campus Master Plan will not result in changes to odor relative existing conditions. At the Vineyard Lodge Housing site, development of new dormitories may occasionally generate temporary odors during construction associated with street paving and architectural coating. Odors associated with construction are short term in duration and will cease once construction is complete. Similarly construction activities on the Greystone site have the potential to generate odors associated with use of equipment, paving, and coatings. The level of odors associated with construction will be minimal given the limited scope and scale of development. The project will not generate excessive odors or dust (as described above) that affects a substantial number of people. Therefore, the project will have less than significant impacts to air quality due to objectionable odors.</p> <p>f. <b>(Greenhouse Gases) Less Than Significant Impact:</b> The BAAQMD Guidelines use a three-tiered approach for setting a significance threshold for the project-level contributions to cumulative GHG impacts. Based on the BAAQMD Guidelines, a project is considered less-than-significant if it either:</p> <p>a) Complies with a legislatively adopted GHG Reduction Strategy which meets or exceeds one of the following three options:</p> <ol style="list-style-type: none"> <li>Reduces emissions to 1990 levels by 2020,</li> <li>Reduces emissions 15% below baseline (2008 or earlier) emission level by 2020, or</li> <li>Meets the plan efficiency threshold of 6.6 MT CO<sub>2</sub>e/service population/year;</li> </ol> <p>b) Emits a total of less than 1,100 metric tons (MT) CO<sub>2</sub>e per year; or</p> <p>c) Emits less than 4.6 MT/service population/year. Metric tons per capita for service population per year; service population includes residents and any employees.</p> <p>At present, the City of St. Helena does not maintain a “qualified” GHG reduction strategy pursuant to the BAAQMD Guidelines. As such, BAAQMD’s screening threshold of 1,100 metric tons (MT) of carbon dioxide equivalents per year (CO<sub>2</sub>e/yr.) is used to evaluate project level significance.</p> <p>The screening size for GHG emissions is 87 dwelling units for a mid-rise apartment complex. The proposed project size is above the screening threshold given that a net increase of 123 dormitories are proposed as well as improvements at the Greystone site. As such, a GHG analysis was conducted by Gilleran Energy. The California Emissions Estimator Model Version 2011.1.1 (CalEEMod) was used to predict net GHG emissions from construction and operation, assuming full-build-out of the project. CalEEMod modeling provides emissions for transportation, areas sources, electricity consumption, natural gas combustion, electricity usage associated with water usage and wastewater discharge, and solid waste land filling and transport.</p> <p><u><b>Construction GHG Emissions</b></u></p> <p>Construction GHG emissions capture demolition of the existing Vineyard Lodge 1 building, excavation of the storage cave, operation of heavy duty equipment, worker and vendor trips, grading and building. GHG emissions associated with construction of the Vineyard Lodge site were estimated to be 389 MT CO<sub>2</sub>. GHG emissions associated with construction at the Greystone site were estimated to be 193 MT CO<sub>2</sub>. As such, construction of the proposed CIA Campus Master Plan, inclusive of both sites, would result in a total GHG emission of 582 MT CO<sub>2</sub>. The BAAQMD does not have an adopted Threshold of Significance for construction-related GHG emissions. Rather, BAAQMD encourages the incorporation of best management practices to reduce GHG emissions during construction. Best management practices are specified under <b>Mitigation Measure AQ-1</b>. Therefore, with</p> |                                                      |                                                    |                                    |                  |

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| <p>AQ-1 potential impacts associated with construction of the CIA Master Plan will be less than significant.</p> <p><u>Operational Emissions</u></p> <p>The CalEEMod model, along with the project vehicle trip generation rates, were used to predict annual emissions associated with operation of the fully-developed Vineyard Lodge site and Greystone site under the proposed project. In 2018, net annual emissions resulting from the proposed project are predicted to be 174 MT of CO<sub>2</sub>e (from Vineyard Lodge) and 114.93 MT of CO<sub>2</sub>e (from Greystone) and the project's total GHG emissions at operation would be 288.93 MT of CO<sub>2</sub>e. As operational emissions would fall well below the BAAQMD established threshold of significance (1,100 MT CO<sub>2</sub>e), impacts to air quality resulting from GHG emission would be less than significant.</p> <p><u>Mitigation Measures:</u></p> <p>AQ-1: The applicant shall incorporate Best Management Practices for all construction activities and clearly indicate these provisions in the specifications. In addition an erosion control plan shall be prepared and submitted to the City of St. Helena prior to any construction activity. BMPs shall include but not be limited to the BAAQMD Basic Construction Mitigation Measures as modified below:</p> <ol style="list-style-type: none"> <li>1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered three times per day;</li> <li>2. All haul trucks transporting soil, sand, or other loose material shall be covered;</li> <li>3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited;</li> <li>4. All vehicle speeds on unpaved roads shall be limited to 15 mph;</li> <li>5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible;</li> <li>6. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used;</li> <li>7. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points;</li> <li>8. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation;</li> <li>9. Construction equipment staging shall occur as far as possible from existing sensitive receptors;</li> <li>10. The Developer shall designate a person with authority to require increased watering to monitor the dust and erosion control program and provide name and phone number to the City prior to issuance of grading permits. Post a publicly visible sign with the telephone number of designated person and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations; and</li> <li>11. The City's Public Works Inspector shall perform visual inspections during grading to assure that dust control is implemented and standard BMP are enforced.</li> </ol> |                                                      |                                                    |                                    |                  |
| <b>4. BIOLOGICAL RESOURCES. Would the proposal result in:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                      |                                                    |                                    |                  |
| a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game (CDFG) or U.S. Fish and Wildlife Service (USFWS)?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                      |                                                    |                                    | ✓                |
| b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                      |                                                    |                                    | ✓                |

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| policies, and regulations or by the CDFG or USFWS?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                      |                                                    |                                    |                  |
| c. Have a substantial adverse effect on Federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, etc.) through direct removal, filling, hydrological interruption, or other means?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                      |                                                    |                                    | ✓                |
| d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                      |                                                    |                                    | ✓                |
| e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                      | ✓                                                  |                                    |                  |
| f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                      |                                                    |                                    | ✓                |
| Sources: St. Helena 1993 General Plan: Open Space and Conservation Element (6-1), (6-2), (6-6); California Natural Diversity Database (CNDDB) Accessed October 13, 2016; "Tree Protection Guidelines and Specifications Developed for the Culinary Institute of America, 830 Pratt Avenue," prepared by Pacific Tree Care, September 2, 2016                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                      |                                                    |                                    |                  |
| <p><u>Setting</u></p> <p>Biological resources are protected by statute including the Federal Endangered Species Act (FESA), the California Endangered Species Act (CESA), and the Clean Water Act (CWA). The Migratory Bird Treaty Act (MBTA) affords protection to migratory bird species including birds of prey. These regulations provide the legal protection for plant and animal species of concern and their habitat.</p> <p>As reported in the General Plan a number of plant and animal species with special-status have been recorded or are suspected to occur within the Urban limits of the City of St. Helena. The city also contains species that are identified in the California Natural Diversity Database (CNDDB) due to rarity and threats, and are considered sensitive resources.</p> <p>Based on a review of the California Natural Diversity Database (CNDDB), the following plant species could be present in the project vicinity: Greene's narrow-leaved daisy (<i>Erigeron angustatus</i>) and Clara Hunt's milk-vetch (<i>Astragalus claranus</i>). Greene's narrow-leaved daisy (<i>Erigeron angustatus</i>) is found in chaparral, on volcanic or serpentine substrates from 260 to 1,000 feet elevation, and was last recorded in 1891 as occurring within the project vicinity. It is not listed as rare, threatened, or endangered. Clara Hunt's milk-vetch (<i>Astragalus claranus</i>) is federally listed as endangered, state-listed as threatened, and on CNPS List 1B. Clara Hunt's milk-vetch is an annual herb in the Pea family (<i>Fabaceae</i>). It occurs in chaparral, cismontane woodland, valley and foothill grassland, often in open grassy hillsides with serpentinite or volcanic substrates, between 245 and 900 feet elevation.</p> <p>The Greystone site supports urban habitat and backs up to oak woodland. The Vineyard Lodge Housing site, likewise, features urban habitat and abuts agricultural development. The project sites have both been substantially developed and the areas of the sites subject to disturbance are not known to support any rare, endangered or special status plant or animal species.</p> <p><u>Impact Analysis</u></p> <p>a. <b>(Sensitive Species) No Impact:</b> The already developed project sites may support species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of</p> |                                                      |                                                    |                                    |                  |

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| <p>Fish and Wildlife or U.S Fish and wildlife service. However, development within the Greystone Campus would be confined to the interior of or beneath the existing building. Development at the Vineyard Lodge Housing site would also be confined to areas that have already been previously disturbed and developed. However, construction activities at the Vineyard Lodge Housing site would include the removal of 21 trees, two of which are coast live oak (<i>Quercus agrifolia</i>). A total of 23 trees would be transplanted. Onsite trees may provide perching and potential nesting opportunities to bird species including migratory birds that are protected under the MBTA. Adherence to the General Plan policy 6.2.13, as well as California Department of Fish and Wildlife Code Section 3503 and the MBTA will ensure that potential impacts to migratory bird species are avoided. Should construction activities and/or tree removal occur within the breeding season (Sept-July), a pre-construction bird survey conducted by a qualified biologist would be conducted pursuant to the mandatory compliance with the MBTA. Accordingly, with adherence to all applicable state and federal laws governing biological resources, such as those named above, no impacts are expected.</p> <p>b. <b>(Sensitive Natural Community) No Impact:</b> The only plant communities on the project sites include urban, ruderal with a limited amount of oak woodland on the Greystone Campus. There are no known wetlands, riparian habitat or other sensitive natural communities identified onsite. The Greystone Campus is located approximately one-half of a mile from the closest stream which is York Creek. The Vineyard Lodge Housing site is located approximately 400 feet from York creek. Given the projects location on two previously developed sites, and the fact that project activities will not encroach into any identified natural community on or near the respective project sites, development of the proposed project would not result in substantial impacts to riparian habitat or other natural communities, nor would it conflict with any policies or program protecting riparian resources. Therefore, the project would have no impacts.</p> <p>c. <b>(Wetlands). No impact:</b> No federally protected wetlands, including but not limited to, marsh, vernal pools or coastal wetlands, are known to exist within either of the project site boundaries or within the vicinity of the proposed project. Therefore, the project will have no impact to federally protected wetlands as defined by Section 404 of the Clean Water Act.</p> <p>d. <b>(Movement Corridor) No Impact</b> There is no evidence of migratory wildlife corridors or nursery sites on or in the vicinity of the project sites. The existing development and active agricultural lands surrounding the project sites makes it relatively inaccessible to many species and eliminates the possibility of the site functioning as a movement corridor. Additionally, development within the Greystone Campus would be confined to the interior of or beneath the existing building and development at the Vineyard Lodge Housing site would be confined to areas that have already been previously disturbed and developed. As such, the proposed project is not expected to substantially interfere with the movement of fish or other wildlife species including migrating species. Therefore, the project will have no impacts to wildlife corridors and species movements.</p> <p>e. <b>(Conflict with Local Policy) Less than Significant with Mitigation:</b> The vegetation and existing trees located on the project sites at the Greystone Campus and the Vineyard Lodge Housing site are predominantly ornamental. Construction activities at the Vineyard Lodge Housing site would remove 21 trees, and transplant another 23 trees. However, two (2) of the trees proposed for removal are coast live oak (<i>Quercus agrifolia</i>). The City of Saint Helena does not have an existing tree preservation policy or tree protection ordinance; however, the policies of Section 6.6 of the Open Space and Conservation Element of the 1993 St. Helena General Plan require the planting of replacement trees where existing significant trees cannot be saved.</p> <p>In accordance with <b>Mitigation Measure BIO-1</b> and given the historical, biological, and aesthetic importance of oaks in the Valley, all oaks proposed for removal from the site shall be replaced in-kind and at a ratio of three (3) new 15 gallon trees for every tree removed. In addition, given the potential for inadvertent disturbance within drip lines of trees proposed for retention or transplanting, the applicant shall be required to comply with <b>Mitigation Measure BIO-2</b> requiring the applicant adhere to the recommendations of the "Tree Protection Guidelines and Specifications</p> |                                                      |                                                    |                                    |                  |



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| Developed for the Culinary Institute of America, 830 Pratt Avenue,” prepared by a certified arborist with Pacific Tree Care, September 2, 2016. The recommendations include specific measures to avoid disturbance within the tree protection zone (TPZ). Accordingly, with <b>Mitigation Measure BIO-1 and BIO-2</b> , impacts would be less than significant.                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                      |                                                    |                                    |                  |
| f. <b>(Conflict with Conservation Plan) No Impact:</b> At present, no Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state Habitat Conservation Plan exist for the City of St. Helena. The already developed project sites, located within the boundaries of the urban limit line, are not designated open space and do not support any significant animal or plant habitat. Therefore, the project is not expected to conflict with the provisions of an adopted Habitat Conservation Plan or any other Natural Community Conservation Plan approved by a local, regional or state body.                                                                                                                                |                                                      |                                                    |                                    |                  |
| <b>Mitigation Measures:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                      |                                                    |                                    |                  |
| BIO-1. All oaks proposed for removal from the Vineyard Lodge Housing site shall be replaced in-kind and at a ratio of three (3) new 15 gallon trees for every tree removed. A portion of replacement oaks may be accommodated on the Greystone Campus if site constraints are such that all replacement trees cannot be accommodated within the proposed site plan. The final Landscape plan showing the location of replacement trees shall be subject to review and approval by the Planning and Community Improvement Director prior to issuance of building permit.                                                                                                                                                                                                         |                                                      |                                                    |                                    |                  |
| BIO-1. The applicant shall comply with the recommendations of the “Tree Protection Guidelines and Specifications Developed for the Culinary Institute of America, 830 Pratt Avenue,” prepared by Pacific Tree Care, September 2, 2016.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                      |                                                    |                                    |                  |
| <b>5. CULTURAL RESOURCES. Would the project:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                      |                                                    |                                    |                  |
| a. Cause a substantial adverse change in the significance of an historical resource as defined in Sec.15064.5?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                      |                                                    | ✓                                  |                  |
| b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Sec. 15064.5?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                      | ✓                                                  |                                    |                  |
| c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                      | ✓                                                  |                                    |                  |
| d. Disturb any human remains, including those interred outside of formal cemeteries?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                      |                                                    | ✓                                  |                  |
| Sources: St Helena General Plan, Appendix A: Historic Resources, 1993; St Helena General Plan, 7.0 Historic Resources Element, 1993; Napa County General Plan, “Cultural and Historic Resources”, Community Character Section, Discussion, Dec 03, 2007 Revised Public Hearing Draft; The Archaeology of the Napa Region Edited By Robert F. Heizer Anthropological Records Vol. 12, No. 6, University of California Press, Berkeley and Los Angeles, 1953.                                                                                                                                                                                                                                                                                                                     |                                                      |                                                    |                                    |                  |
| <b>Setting:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                      |                                                    |                                    |                  |
| St. Helena and the greater Napa Valley exhibit a long record of human occupation, possibly extending as far back as 10,000-12,000 years, when Native Americans first inhabited the Napa Valley. At the time of first contact with European settlers of the area, the Wappo had established a village near present day St. Helena known as Annakatanoma. As such, the Napa Valley is known to contain numerous traces of past human activity, ranging from early Native American sites and artifacts to the relicts of historic-era agricultural and ranching activities. Resources have been identified at many locations throughout Napa County and are protected under various federal, state, and local statutes, including the California Environmental Quality Act (CEQA). |                                                      |                                                    |                                    |                  |
| Within the City limits, more than 200 historic resources have been identified. Two major surveys conducted in 1978 and 2006 provide the basis for most of the historic resources identified in the City. Additionally individual resources and the Downtown Commercial District are listed on the National Register of Historic Places. St. Helena’s Historic Commercial                                                                                                                                                                                                                                                                                                                                                                                                        |                                                      |                                                    |                                    |                  |

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| <p>District includes 35 contributing resources and 13 non-contributing resources<sup>2</sup>.</p> <p>The Greystone Campus features the former Greystone Cellars building, an 1888 Richardsonian Romanesque building that historically operated as a cooperative winery. The Greystone Cellars Building is listed on the National Register of Historic Places (NRHP). The proposed work at the Greystone Site includes re-configuration of interior functions, addition of three modular storage units along the west elevation, and excavation of storage tunnels at the building' north end.</p> <p>The Vineyard Lodge site at 830 Pratt Avenue historically served agriculture uses until the 1960s when it was developed with a convalescent home, now "Vineyard Lodge I". The Vineyard Lodge I was constructed in the early 1960s and therefore meets the age requirements to be eligible for listing as a historic resource on the California Register of Historic Resource (CRHR). However, review of available records indicates that the building does not meet the significance criteria required for listing on the CRHR. The building is not associated with important events, or persons, nor does it embody distinctive characteristics of a type, period, region, or method of construction, it is not the work of a master and is not expected to yield important information related to prehistory or history of the local area. Further, the building has undergone a number of modifications and additions. As such, the Vineyard Lodge site does not include any above-ground historic resources, but given the long record of human occupation in St. Helena and the greater Napa Valley, it may hold potential to yield archeological resources or native American remains.</p> <p>In accordance with the provisions of Public Resources Code §2080.3.1(d) and Assembly Bill 52, the City of St. Helena notified Tribes having jurisdiction over all or part of the project sites of the proposed project in a letter post stamped August 31,2016. In accordance with Public Resources Code §21083.3.1, 21083.3.2, and 21083.3 the Tribes had thirty (30) days to request consultation. The Yocha Dehe Wintun Nation Tribe contacted the City by mail on October 13, 2016 requesting to initiate consultation. The Yocha Dehe requested that a tribal monitor be present for ground breaking activities. Other tribes contacted did not request consultation under AB 52 for this project indicating that they have no concerns that the project may impact tribal (traditional) cultural resources.</p> <p><u>Impact Analysis:</u></p> <p><b>a) (Historic Resources) Less than Significant:</b> The proposed work at the Greystone Site is confined to the Greystone Cellars building, along the west elevation and below the north end of the building. Three modular units ranging in size from 592 sf to 944 sf are proposed on the west elevation (rear) of the building. The units will be accessed from an existing roadway, supported on new horizontal steel structure that spans the area and similar to existing modern mechanical equipment supports. Utilitarian in nature, the units are constructed of painted metal siding, doors, and flat roofs behind shallow parapets.</p> <p>The proposed siting and design will not alter character defining features, nor require removal of historic materials. It is anticipated the units will be self-supporting and will not require physical attachment. Should attachment to the historic masonry wall be required because of further investigation, this will be achieved using the least intrusive means possible and any connectors would be adhered to existing mortar joints so as to avoid damage to the historic masonry. This would ensure that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired. If units were removed in the future, repairs would be accomplished in a manner to match the physical characteristics of strength, color, size and texture of the historic mortar.</p> <p>The exterior of the Greystone Cellars building would be maintained in its current configuration, including alterations that may have acquired historic value over time. The distinctive masonry features will be preserved and the proposed work does not include replacement of any character-defining features. The proposed modular units are located away from principal elevations, have been designed to fit below the historic eave of the building, and are minimal in size compared to the original structure. Proposed work will use materials to differentiate the additions from the historic exterior masonry. These</p> |                                                      |                                                    |                                    |                  |

<sup>2</sup> Contributing resources date from the historic period of significance established for the district. Non-contributing resources are those that, due to date of construction, alterations, or other factors, do not contribute to the district's historic significance or character.

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| <p>characteristics reflect the project's compliance with the Secretary of the Interior Standards for Rehabilitation (SOISR). In accomplishing a compliant SOISR project, the impact to historic resources would be considered be less than significant.</p> <p>Neither Vineyard Lodge I nor II are eligible for listing on the CRHR and therefore are not considered "historic resources" for the purposes of CEQA. As such, there is no expectation that the project may result in an adverse effect to the significance of a historic resource and no impacts are anticipated from demolition of Vineyard Lodge I and development of the proposed Vineyard Lodge buildings.</p> <p>Accordingly, given that project activities at the Greystone site will be performed in accordance with the Secretary of the Interior's Standards for Rehabilitation and that project activities on the Vineyard Lodge site will not encounter any above-ground historic resources, the project is not expected to adversely impact any historic era resources and any impacts would be less than significant.</p> <p><b>b) (Archaeological) Less than Significant with Mitigation:</b> The Greystone Campus has been developed since the 1880s and the site has been subject to ground-disturbing activities including grading and terracing. To date no archaeological resources have been uncovered. The proposed project excavations are located within the limestone strata beneath the depth of human occupation and therefore are not expected to reveal any significant finds. The cave's exit located near the existing retaining wall of the site will surface with a minimum amount of soil disturbance. Based upon the size and location of disturbed soil, it is not expected that the excavation would result in the discovery of archaeological remains. Likewise, the Vineyard Lodge Site has been the location of varied soil-disturbing activities associated with the construction of the current Vineyard Lodge I and II. These former building campaigns have not revealed the presence of archeological resources, including Native American remains or paleontological resources.</p> <p>Although neither of the project sites are located within any areas of elevated potential for the occurrence of archeological resources, given the long history of human occupation in St. Helena, ground disturbing activities still hold the potential to impact unidentified resources. It is expected that the depth of disturbance at the Greystone Campus will range from approximately 24 to 73 feet below grade (FBG) and at the Vineyard Lodge site will range from 4 to 15 FBG.</p> <p>Given the potential for the presence of yet undiscovered cultural resources associated with past Prehistoric human occupation in the vicinity of the project sites, <b>Mitigation Measure CUL-1</b> is provided in to ensure that should any archeological resources be encountered during grading or excavation, all ground disturbing activity shall be halted immediately until a qualified archaeologist can evaluate the potential resource and recommend further action. Implementation of CUL-1 will ensure that in the event of accidental discovery the potential for the project to adversely impact or result in a change to the significance of archeological resources would be reduced to less than significant levels. Further, to comply with the provisions of the AB 52 and address concerns communicated by the Yocha Dehe Wintun Nation Tribe, Mitigation Measure CUL-2 has been added requiring that the project applicant authorize the Yocha Dehe Wintun Nation Tribe or qualified archeological professional to observe and monitor earth-moving, grading, and/or excavation at the Vineyard Lodge Housing Site to the extent that such activities would disturb soil profiles located 10 to 15 feet below grade. This will provide oversight of work in areas with elevated potential for the presence of traditional cultural resources. <b>With Mitigation Measures CUL 1 and CUL-2</b> Impacts will be less than significant.</p> <p><b>c) (Paleontological Resources) Less than Significant with Mitigation:</b> The St. Helena General Plan does not identify the presence of any paleontological or unique geological resources within the boundaries of the City Limits. Moreover, the project sites have been previously developed and subject to ground disturbance. Therefore limited expectation exists for paleontological resources to be present on either of the project sites. Nevertheless, potential remains for the discovery of buried paleontological resources. Because the potential for inadvertent discovery of paleontological or unique geological resources exists, <b>Mitigation Measure CUL-3</b>, as set forth below, will be instituted. CUL-3 will ensure that proper procedures are followed in the event of discovery; thereby reducing potential impacts to levels below significance.</p> <p><b>d) (Human Remains) Less than Significant</b> No evidence suggests that human remains have been interred within the</p> |                                                      |                                                    |                                    |                  |

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| <p>boundaries of the project site. However, in the event that during ground disturbing activities, human remains are discovered to be present, the applicant would be subject to the CA Health and Safety Code Section 7050.5 which mandates the immediate cessation of ground disturbing activities near or in any area potentially overlying adjacent human remains, and requires contacting the Napa County Coroner upon the discovery of any human remains. If it is determined by the Coroner that the discovered remains are of Native American descent the Native American Heritage Commission shall be contacted immediately. If appropriate, the project sponsor shall retain a City-qualified archeologist to provide adequate inspection, recommendations and retrieval. It is expected that compliance with CA HSC Sect.7050.5 as required under state law and performance of actions therein will ensure that in the event of accidental discovery of historically significant remains all impacts will remain at levels below significance.</p> <p><b>Mitigation Measures:</b></p> <p>CUL-1. If during the course of ground disturbing activities, including, but not limited to excavation, grading and construction, a potentially significant prehistoric or historic resource is encountered, all work within a 100 foot radius of the find shall be suspended for a time deemed sufficient for a qualified and city-approved cultural resource specialist to adequately evaluate and determine significance of the discovered resource, confer with tribal representative, as appropriate, and provide treatment recommendations. Should a significant archeological resource be identified a qualified archaeologist shall prepare a resource mitigation plan and monitoring program to be carried out during all construction activities.</p> <p>CUL-2. The project applicant shall authorize the Yocha Dehe Winton Nation Tribe or qualified archeological professional to observe and monitor earth-moving, grading, and/or excavation at the Vineyard Lodge Housing Site to the extent that such activities would disturb soil profiles located 10 to 15 feet below grade.</p> <p>CUL-3. In the event that paleontological resources, including individual fossils or assemblages of fossils, are encountered during construction activities all ground disturbing activities shall halt and a qualified paleontologist shall be procured to evaluate the discovery and make treatment recommendations.</p> |                                                      |                                                    |                                    |                  |
| <b>6. GEOLOGY AND SOILS. Would the project:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                      |                                                    |                                    |                  |
| a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                      |                                                    |                                    |                  |
| i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area, or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Pub. 42)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                      |                                                    |                                    | ✓                |
| ii) Strong seismic ground shaking?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                      |                                                    | ✓                                  |                  |
| iii) Seismic-related ground failure, including liquefaction?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                      |                                                    | ✓                                  |                  |
| iv) Landslides?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                      |                                                    | ✓                                  |                  |
| b. Result in substantial soil erosion or the loss of topsoil?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                      |                                                    | ✓                                  |                  |
| c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                      | ✓                                                  |                                    |                  |
| d. Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial risks to life or property?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                      |                                                    | ✓                                  |                  |

Culinary Institute of America at Greystone (PL16-042)  
Vineyard Lodge Housing (PL16-043)  
Initial Study and Mitigated Negative Declaration

December 9, 2016  
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| e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                      |                                                    | ✓                                  |                  |
| <p>Sources: Geotechnical Study Report prepared by RGH Consultants Inc., May 16, 2008; Geotechnical Engineering Study- Storage Caves: The Culinary Institute of America at Greystone 2555 Main Street, Prepared by Condor Earth Technologies Inc. June 22, 2016; Association of Bay Area Governments (ABAG), 2016 Napa County Earthquake Hazard Map, <a href="http://resilience.abag.ca.gov/earthquakes/napa/">http://resilience.abag.ca.gov/earthquakes/napa/</a>, Accessed 9.22.16; California Building Code (CBC), 2013; CA Department of Conservation.</p> <p><u>Setting:</u></p> <p>The Bay Area is one of the most seismically active regions in the Country. The City of St. Helena is located within the San Andreas Fault system, which is 44 miles wide and extends throughout much of the North Bay Area. The nearest active faults are the Rodgers Creek Fault Zone, located approximately 13 miles west of the City and the West Napa Fault located about 1 mile to the south. No active faults directly traverse the City; however, potential exists for geologic hazards in and around the urban limit line associated with ground shaking, including: liquefaction, ground failure, and seismically-induced landslides. The project sites are classified as California Building Code (CBC) Site Class C (Greystone) and Site Class D (Vineyard Lodge), and therefore are subject to stringent seismic design criteria.</p> <p>Geotechnical Consultants, Condor Earth Technologies, prepared a Geotechnical Engineering Study to provide recommendations for the proposed caves to be located on the Greystone site. The Greystone site is located on a sloped hillside and underlain by volcanoclastic alluvium of the Sonoma Volcanics beneath a layer of artificial fill. Fill materials are generally characterized as stiff to very stiff lean clay to lean sandy clay. The volcanoclastic alluvium is severely weathered and contains cobble to boulder sized volcanic rock. No groundwater was encountered. Subsurface exploration conducted as part of the Geotechnical Study relied on three drilled borings and four test pits to inform the design recommendations of the cave.</p> <p>As proposed, the cave would have a portal opening of 10 feet high by 10 feet wide. A concrete frame will be doweled to the loading dock wall face to provide reinforcement and structural support. Internally, the tunnel width will range from 8 to 14 feet. Ground cover above the cave will range from 2 to 4 feet at the entry to as much as 50 feet at the southwest side of the cave where the tunnels extends beneath the hillside. Maximum depth of excavation will range from approximately 24 feet below grade (FBG) beneath roadway portions to a maximum of 73 FBG at sections located beneath the hillside.</p> <p>Geotechnical considerations identified for the Greystone site include:</p> <ol style="list-style-type: none"> <li>1. The potential to encounter underground utilities;</li> <li>2. Presence of low ground cover and potential distress to existing site improvements; and</li> <li>3. The proposed caves ability to support loads associated with the ground weight, existing site improvements, and traffic.</li> </ol> <p>The Vineyard Lodge site extends over relatively level alluvial terrain outside of the Napa River Flood Plain. Natural drainage consists of sheet flows over the ground surface that concentrate in man-made surface drainage elements such as roadside ditches and natural drainage elements including swales and creeks. Overall, the ground surface at 830 Pratt Avenue is hard, but remains subject to settlement as the moisture content reaches saturation. Groundwater has been detected at depths ranging from 7 to 11 feet below ground surface (FBG). The site is within Zone X of the current FEMA flood Map 06055C0263E, effective 09/26/2008.</p> <p>In 2008, Consultants, RGH, prepared a Geotechnical Study for the Vineyard Lodge site in anticipation of the Vineyard Lodge II project. The study evaluated site conditions, seismic hazards, and geotechnical issues. The primary Geotechnical concerns identified include:</p> |                                                      |                                                    |                                    |                  |

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| <ol style="list-style-type: none"> <li>1. The presence of two to three feet of weak, porous, compressible, clayey surface soils and heterogeneous fill;</li> <li>2. The detrimental effects of uncontrolled surface runoff and groundwater seepage on the long-term satisfactory performance of projects of this type, especially those constructed on alluvial fans, given the erosion potential and porous nature of surface soils; and</li> <li>3. Strong ground shaking predicted to impact the site during the life of the project.</li> </ol> <p><u>Impact Analysis</u></p> <p><b>a.i) ( Fault Rupture) No Impact:</b> Fault rupture occurs when the ground surface fractures as a result of fault movement during an earthquake and almost always follows preexisting fault traces, which are zones of weakness. Given that the project site is not considered part of the Alquist-Priolo Earthquake fault zone (APFZO) and no identified active faults traverse the site, there is no expectation that the site would be vulnerable to fault rupture. The nearest fault is the West Napa Fault, which had movement in 2014. The northern limit of rupture for the West Napa Fault was 15 miles to the south. Other nearby faults with surface rupture include the Rodgers Creek Fault, located approximately 12 miles southwest of the City and the San Andreas Fault zone, located 32 miles southwest. There is no risk of fault-related ground rupture during earthquakes within the limits of the site due to a known Alquist-Priolo Earthquake Fault Zone. Therefore, there are no impacts expected due to fault rupture for the Greystone site or on the Vineyard Lodge site.</p> <p><b>a.ii)( Ground shaking) Less than Significant Impact:</b> The proximity of the City to the active Rodgers Creek Fault and the West Napa Fault places it within Zone VII to VIII (strong to very severe) of the Modified Mercalli Intensity Shaking Severity Level. As such, the project site holds potential to expose people or structures to substantial adverse effects resulting from strong seismic ground shaking. The resulting vibrations would likely cause primary damage to buildings and infrastructure with secondary effects being ground failures in loose alluvium, landslide deposits or poorly compacted fill. Both the primary and secondary effects pose a risk of loss of life or property.</p> <p>Conformance with standards set forth in the Building Code of Regulations, Title 24, Part 2 (the California Building Code 3.7-20 Chapter 3: Setting, Impacts, and Mitigation Measures [CBC]) and the California Public Resources Code, Division 2, Chapter 7.8 (the Seismic Hazards Mapping Act) will ensure that potential impacts from seismic shaking are less than significant. The Geotechnical Study prepared by Condor found the Greystone project site to be classified as site Class C according to CBC 2013. Site Class C requirements include recommendations for foundation types, appropriate structural systems, and ground stabilization strategies. The adherence to Class C Specifications will ensure the proposed caves and tunnels proposed would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death as a result of seismic activity.</p> <p>The Geotechnical Study prepared by RGH Consultants found the Vineyard Lodge project site to be classified as site Class D; Site Class D requirements include recommendations for foundation types, appropriate structural systems, and ground stabilization strategies. The adherence to Class D Specifications will ensure the proposed dormitory buildings would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death as a result of seismic activity. With adherence to seismic design requirements as set forth in the California Building Code ground shaking would not adversely expose people or structures to elevated risk of loss. Therefore, the project is expected to have a less than significant impact as a result of seismic activity.</p> <p><b>a.iii (Seismic-related ground failure/liquefaction) Less Than Significant Impact:</b> Liquefaction is a phenomena associated with fine-grained, loosely-packed sands and gravels subjected to ground shaking as a result of seismic activity. Liquefaction can lead to total and/or differential settlement and is largely dependent upon the intensity of ground-shaking and response of soils underlying the site. According to the Geotechnical Study and assuming a peak ground acceleration of 0.33g generated by a 6.5 magnitude earthquake on the West Napa Fault, the liquefaction potential of the Vineyard Lodge site appears to be low. Similarly, the Geotechnical Study completed for the Greystone site concluded that based on subsurface conditions the site</p> |                                                      |                                                    |                                    |                  |

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| <p>potential for liquefaction was low. Accordingly, hazards related to ground failure and/or liquefaction are not anticipated and impacts are expected to be less than significant.</p> <p><b>a.iv) (Landslides) Less than Significant Impact:</b> The risk of landslide is dictated by several factors including precipitation conditions, soil types, steepness of slope, vegetation, seismic conditions and level of human disturbance. When certain conditions are present landslides can be triggered as a result of seismic activity. Landslides have been known to occur within Napa County, but are typically confined to slopes steeper than 15% and occur in areas underlain by geologic units that have demonstrated stability problems. Based on Condor's Geotechnical Study, the Greystone project site does not contain any historic landslides and no evidence of past landslides were observed. Condor concluded that the potential for landslides was low and no mitigation was required. Therefore impacts due to loss of structures of life from landslides are expected to be less than significant at the Greystone site.</p> <p>The Vineyard Lodge site is relatively flat and not in close proximity to steep slopes therefore the proposed project is not expected to expose people or structures to substantial adverse effects, including the risk of loss, injury or death resulting from landslides and no impacts are anticipated. Based on sites flat topography and that it does not exhibit past issues, impacts associated with liquefaction and landslides are expected to be less than significant.</p> <p><b>b. (Soil erosion or the loss of topsoil) Less than Significant Impact:</b> Development of the project will require site preparation and grading activities that will potentially result in soil erosion or the loss of topsoil if not properly controlled. Water and wind serve as the primary catalyst of soil erosion, with steeper slopes intensifying the effects. Vegetation removal as part of the site preparation process as well as grading and ground disturbing activities associated with development can heighten the potential for and accelerate soil erosion. Further, the Vineyard Lodge site extends over an alluvial fan which is predisposed to erosion given its porous nature.</p> <p>Project activities are not expected to generate a substantial loss in topsoil beyond what has occurred during previous site development, but will involve demolition of Vineyard Lodge I and grubbing including the removal of vegetation such as brush, trees and root systems, and dense growths of grass. Accordingly, construction activities do hold the potential to result in erosion if not properly performed. All ground activities associated with the project are subject to the City of Saint Helena's Erosion and Sediment Control Plan requirements (Chapter 13.32.090 D.3 of the Municipal Code). The erosion control plan is required to identify techniques such as site watering, sediment capture, equipment staging and laydown pad, and other erosion control measures to be implemented during construction activity on the project site. Erosion associated with construction activities is also governed by the mandatory requirements of the National Pollution Discharge Elimination System (NPDES) General Permit, which is implemented through a Storm Water Pollution Prevention Plan (SWPPP). Compliance with these mandatory requirements would prevent substantial soil erosion and loss of topsoil.</p> <p>Adherence to uniformly applied development standards, including the preparation of a SWPPP and/or an Erosion and Sediment Control Plan will ensure that any potential impacts due to erosion and sedimentation will be reduced to less than significant levels. Therefore, the project will generate a less than significant impact related to soil erosion or loss of topsoil.</p> <p><b>c.(Unstable soil) Less than Significant Impact with Mitigation:</b> The Geotechnical Studies prepared for the Greystone site and the Vineyard Lodge site set forth specific recommendations to address potential stability concerns. The Geotechnical Study prepared for the Greystone site identified the presence of fills and shallow ground cover above the cave entrance that could be potentially unstable if not properly reinforced. As such the Geotechnical Study recommends specific design parameters and construction techniques to ensure that unstable soils do not result in impacts due to development.</p> <p>The Geotechnical Study prepared for the Vineyard Lodge Housing site identified the presence of heterogeneous fills of unknown quality and placement which can settle or heave under new loads. Weak and porous surface solids consistent with the Bale Clay Loam soil series may appear hard and strong under dry conditions but can lose strength rapidly and settle under new loads as</p> |                                                      |                                                    |                                    |                  |



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| <p>their moisture content increases and approaches saturation. If the settlement is not uniform, or if collapse occurs, structural damage would likely result. To remediate the potential impacts associated with unstable geologic units, the preliminary geotechnical study, prepared in 2008, recommends that weak soils be excavated to a depth of three feet and replaced with properly compacted engineered fill and/or foundations may be engineered to extend to a depth below the weak surface soils. As such, to ensure that potential impact due to unstable soil conditions are reduced to less than significant levels, <b>Mitigation Measure GEO-1</b> as set forth below shall be implemented. <b>Mitigation Measure GEO-1</b> requires that development of the Greystone cave and tunnels, as well as the Vineyard Lodge dormitories, adhere to applicable recommendations made by the respective Geotechnical Studies for each site and as deemed appropriate by the City Engineer.</p> <p>GEO-1 requires that construction techniques adhere to the recommendations set forth in the Geotechnical Studies including that site preparation remove potentially weak and compressible fills and re-compaction prior to re-use onsite, adhere to compaction recommendations for structural fill and pavements, and focused attention on reinforcement of the cave tunnels. Adherence to those recommendations outlined in the project's geotechnical studies and <b>Mitigation Measure GEO-1</b> will ensure that potential impacts from unstable soils are reduced to less than significant levels.</p> <p><b>d.(Expansive soil) Less than Significant Impact:</b> The Geotechnical Studies prepared for the Greystone Master Plan identify a medium to low potential for expansive soils. The Greystone site exhibits a low to medium potential for plasticity and a low potential for volume changes between wet and dry soil conditions. Similarly, the Vineyard Lodge site indicates that the Bay Clay Loam soil series exhibits a medium to low expansive potential whereby they exhibit moderate to low strength and volume changes in reaction to seasonal fluctuations in moisture content. As such, neither site exhibits elevated concern associated with expansive soils and it is expected that standard construction techniques associated with Class C and D requirements will be adequate to ensure that soil expansion does not result in significant impacts. Therefore, potential impacts associated with expansive soils are expected to be less than significant.</p> <p><b>e.(Septic tanks or alternative wastewater disposal) Less than Significant Impact:</b> At present, the Vineyard Lodge Housing Site has a primary treatment system that includes two existing septic tanks of 2,000 and 2,500 gallons, respectively. In order to accommodate the increase in effluent generated by the new dormitories, the project will remove the existing 2,000 gallon tank currently serving Vineyard Lodge 1, and add three new septic tanks ranging in size from 2,500 gallons to 5,000 gallons. Given that the site has not displayed any instability problems related to the existing septic tanks and that, pursuant to the Geotechnical Study prepared for the site and <b>Mitigation Measure GEO-1</b>, any unstable soils will be engineered to an acceptable strength, any impacts related to the soils ability to support the installation of septic tanks would be less than significant.</p> <p><b>Mitigation Measures:</b></p> <p>GEO-1. All recommendations outlined in the Geotechnical Studies prepared by RGH (May 16, 2008) and by Condor Earth Technologies (dated June 22, 2016), including those related to site preparation and grading, excavation, seismic design, cave and tunnel design and foundation system design, are herein incorporated by reference and shall be adhered to insofar as they are applicable to the subject project and to ensure that construction of the proposed structures and buildings adequately accounts for the geotechnical particularities of the site. All recommendations are subject to review and approval by the City Engineer and may be modified at his/her discretion. Prior to Certificate of Occupancy, the geotechnical engineer shall inspect the site work and construction and shall certify in writing that the improvements have been performed in accordance with the Geotechnical Studies, or as modified by the City Engineer.</p> |                                                      |                                                    |                                    |                  |
| <b>7. Hazards and Hazardous Materials</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                      |                                                    |                                    |                  |
| a. Create a significant hazard to the public or the environment through the routing, transport, use or disposal of hazardous                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                      |                                                    | ✓                                  |                  |

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| b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                      |                                                    | ✓                                  |                  |
| c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                      |                                                    |                                    | ✓                |
| d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                      |                                                    |                                    | ✓                |
| e. For a project located within an airport land use plan, would the project result in a safety hazard for people residing or working in the project area?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                      |                                                    |                                    | ✓                |
| f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                      |                                                    |                                    | ✓                |
| g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                      |                                                    |                                    | ✓                |
| h. Expose people or structures to a significant risk of loss, injury or death involving wild land fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wild lands?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                      |                                                    |                                    | ✓                |
| Sources: St. Helena 1993 General Plan; EnviroStor Database (accessed 10/11/16); GeoTracker Database (accessed 10/11/16); Phase 1 Environmental Site Assessment for 830 Pratt Avenue, Prepared by Kleinfelder, December 15, 2003; Calfire Wildland Hazards Map, Adopted 11/2007.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                      |                                                    |                                    |                  |
| <p><u>Setting</u></p> <p>The California Department of Toxic Substances Control (DTSC) defines a hazardous material as: “a substance or combination of substances that, because of its quantity, concentration or physical, chemical, or infectious characteristics, may either: 1) cause, or significantly contribute to an increase in mortality or an increase in serious, irreversible, or incapacitating illness; or 2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported, disposed of, or otherwise managed.” Regulations governing the use, management, handling, transportation and disposal of hazardous waste and materials are administered by Federal, State and local governmental agencies. Pursuant to the Planning and Zoning Law, the Department of Toxic Substances Control (DTSC) maintains a hazardous waste and substances sites list (e.g., Cortese List). Existing hazardous materials and/or waste within St. Helena include underground storage tanks, Polychlorinated Biphenyls (PCBs), asbestos, and pesticides.</p> <p>Hazardous waste management in St. Helena is administered by the Napa County Department of Environmental Management (DEM) through the Certified Uniform Program Agency. The CUPA program oversees five hazardous materials programs: Hazardous Materials Management Plans (HMMP) program, California Accidental Release Prevention (CalARP) program, underground storage tank (UST) programs, aboveground storage tank (AST) programs, and hazardous waste generation and disposal. The California Department of Industrial Relations, Division of Occupational Safety and Health (DOSH) (formerly known as Cal/OSHA), is charged with enforcement of state regulation and the supervision of workplaces in California that are not under direct federal jurisdiction. State worker health and safety regulation applicable to construction workers include training requirements for hazardous waste operation and emergency response.</p> |                                                      |                                                    |                                    |                  |

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| <p>A review of available records, databases (EnviroStor and GeoTracker) and reports indicate that the Greystone Campus and Vineyard Lodge Housing site are located approximately 6,900 feet and 4,900 feet, respectively, from a PG &amp; E Voluntary Cleanup site. The Vineyard Lodge site historically supported residential and agricultural (viticulture) uses. According to historic aerials, the site was originally developed in 1902 with a single family residence and outbuilding with the remaining land devoted to vineyard. By 1968 the historic aerials indicate the presence of the Marlinda Convalescent home. In 2003, consultants, Kleinfelder, prepared a Phase I Environmental Site Assessment (ESA) for the Vineyard Lodge Site. The Phase I did not identify the presence of any recognized environmental conditions (REC).</p> <p><u>Impact Analysis</u></p> <p><b>a-b (Significant Hazard; Accident) Less than Significant:</b> The proposed project will involve the demolition of Vineyard Lodge I (c. 1960) followed by the construction of three new residential buildings. Site preparation, construction activities and material delivery may result in the temporary presence of potentially hazardous materials including, but not limited to fuels and lubricants, paints, solvents, insulation, and electrical wiring onsite. Although these potentially hazardous materials may be present onsite during construction the applicant is required to comply with all existing federal, state and local safety regulations governing the transportation, use, handling, storage and disposal of potentially hazardous materials. Once construction is complete there will not be any ongoing use or generation of hazardous materials other than common household hazardous waste onsite.</p> <p>Given that Vineyard Lodge I was constructed before 1978, the building has the potential to contain lead based paint (LBP) and or asbestos containing material (ACBM). Disturbance of the lead based paint during demolition activities could expose workers to potentially hazardous compounds or release such compounds into the environment if not properly managed. Title 17, California Code of Regulations (CCR), Division 1, Chapter 8: Accreditation, Certification and Work Practices for Lead-Based Paint and Lead Hazards, defines lead-based paint as paint or other surfacing coating that contains an amount of lead equal to, or in excess of, one milligram per square centimeter (1.0 mg/cm<sup>2</sup>) or more than 0.5% by weight. In practice, this is interpreted to mean that any detectable amount of lead is regulated. For example, employees who perform trigger tasks (such as manual demolition) are required to receive employer provided training, air monitoring, protective clothing, respirators, and hand washing facilities. In addition, there are standard work practices required such as the use of wet methods and vacuums. It is required that all demolition and general work activities be conducted pursuant to all federal, state and local regulation as required by DOSH, Federal OSHA, USEPA, DTSC and BAAQMD.</p> <p>In addition, demolition activities may hold the potential to release asbestos containing material given that the building's construction date preceded the banning of spray-applied asbestos in 1989. The EPA defines recognized asbestos containing materials (RACM) as any material exhibiting a composition with 1% or more of asbestos. National Emission Standard for Hazardous Air Pollutants (NESHAP), Regulation 40 CFR Part 61, stipulates that no emissions are allowed during building demolition or renovation activities involving RACM. In accordance with NESHAP, facilities proposed for demolition must be surveyed for total RACM, Category 1 non-friable ACM, and Category 11 Non-friable ACM prior to project activities. The Bay Area Air Quality Management District (BAAQMD) implements EPA regulations governing RACM through Regulation 11, Rule 2: Asbestos Demolition, Renovation, and Manufacturing. Regulation 11, Rule 2 establishes requirements for the identification, reporting, handling, and disposal of RACM. The due compliance with federal, state and local regulations described above will ensure that hazards associated with the potential presence of RACM and LBP will not exceed less than significant levels.</p> <p>Last, prior to the commencement of site preparation and construction activities, a Stormwater Pollution Prevention Plan (SWPPP) that includes Best Management Practices (BMPs) would be implemented in accordance with the California State Water Resources Control Board (SWRCB) requirements. BMP are required to include measures to prevent spills and require onsite materials for cleanup. The applicant is required to comply with all federal and state regulations as overseen by the Sonoma County's CUPA. Accordingly, compliance with all applicable state and federal laws will ensure</p> |                                                      |                                                    |                                    |                  |

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| that impacts related to the creation of a significant hazard are less than significant.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                      |                                                    |                                    |                  |
| <p><b>c. (Within 1/4 mile of a school) No Impact:</b> Neither of the project sites are located within a quarter mile of a school. The nearest school, Robert Louis Stevenson Middle School, is located approximately 0.5 miles southeast of the Greystone Campus and 0.4 miles south of the Vineyard Lodge Housing site. Therefore, no impacts related to the emission or handling of hazardous, or acutely hazardous materials, within one-quarter mile of an existing or proposed school are expected.</p> <p><b>d. (Cortese Site) No Impact:</b> The project site is not listed as a Cortese site. There is no indication of spills, leaks, or contaminated soils on the project site. Therefore, the project will not create a significant hazard to the public or the environment by virtue of it being located on an identified Cortese site.</p> <p><b>e,f. (Airport land use/airstrip) No Impact:</b> The project is not located within the boundaries of an airport land use plan or located in close proximity to a private airstrip; the nearest airport is the Napa County Airport located approximately 25 miles south of the project site. Therefore, the project would have no impacts associated with airport-related hazards.</p> <p><b>g. (Emergency Response plan) No Impact:</b> The project would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. The project will not alter any emergency response or evacuation routes. Site plans include ingress and egress access that accommodate emergency vehicles and provide connectivity to the existing circulation and street system. California has developed an emergency response plan to coordinate emergency services by federal, state, and local government, including responding to hazardous materials incidents. The State Office of Emergency Services (OES) employs a Hazardous Materials (Haz Mat) Division which enforces multiple programs that address hazardous materials. There are no aspects of the proposed project that will interfere with an adopted emergency or evacuation plan and no impacts are anticipated.</p> <p><b>h. (Wildland Hazard) Less than Significant Impact:</b> The City is characterized by a narrow valley floor surrounded and intermingled with steep hill terrain, containing areas which are susceptible to wildland fires. Wildland fires are of concern particularly in expansive areas of native vegetation of brush, woodland, grassland and forest that have succumbed to prolonged drought conditions. However, both of the project sites are located within developed areas, and according to the 2007 CAL FIRE "Fire Hazard Severity Zones" Map, both sites are located outside of the "Very High Fire Hazard Severity Zone" and categorized as Non- VHFHZ. Accordingly, no impacts related to wildland hazards are expected.</p> <p><b>Mitigation Measures:</b> None Required.</p> |                                                      |                                                    |                                    |                  |
| <b>8. Hydrology and Water Quality</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                      |                                                    |                                    |                  |
| a) Violate any water quality standards or waste discharge requirements?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                      |                                                    | ✓                                  |                  |
| b.) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                      |                                                    | ✓                                  |                  |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                      |                                                    | ✓                                  |                  |

Culinary Institute of America at Greystone (PL16-042)  
Vineyard Lodge Housing (PL16-043)  
Initial Study and Mitigated Negative Declaration

December 9, 2016  
Page 35 of 60

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| d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                      |                                                    | ✓                                  |                  |
| e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                      |                                                    | ✓                                  |                  |
| f) Otherwise substantially degrade water quality?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                      |                                                    | ✓                                  |                  |
| g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                      |                                                    |                                    | ✓                |
| h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                      |                                                    |                                    | ✓                |
| i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                      |                                                    | ✓                                  |                  |
| j) Inundation by seiche, tsunami, or mudflow?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                      |                                                    |                                    | ✓                |
| <p>Sources: Napa County General Plan; 1993 St. Helena General Plan; Drainage and Hydrology Analysis prepared for the Culinary Institute of America Vineyard Lodge Use Permit Application by Summit Engineering, September 2, 2016; Stormwater Control Plan Culinary Institute of America Vineyard Lodge Use Permit, prepared by Summit Engineering, June 21, 2016; napawatersheds.org; City of St. Helena Comprehensive Flood Protection Project, year 3 Annual Status Report, prepared by Waterways Consulting, December 15, 2013.</p> <p><u>Setting:</u></p> <p>The Greystone Master Plan is located within the Napa River watershed which comprises an area of approximately 426 miles and extends in a northwesterly direction from San Pablo bay in the south to Mount St. Helena in the north over a distance of approximately 55 miles. The Napa River runs along the northern boundary of the City of St. Helena. The Napa River drains the watershed and discharges to the Napa Sonoma Marsh on the margins of the San Pablo Bay. Major tributaries serving the Napa River and proximate to the project sites include York Creek and Sulphur Creek. The Greystone and Vineyard Lodge sites are located near to, but outside of, dam inundation areas for nearby storage facilities including St. Helena Lower Dam (approximately 0.8 mile west of the site) and Bell Canyon Dam (approximately 2.5 miles north of the site).</p> <p>In 2011 the City completed major structural modifications to implement the St. Helena Flood Protection Project. The Flood Protection project introduced flood control facilities and drainage improvements to mitigate the 200 year flood event in areas proximate to the Napa River and it's confluence with Sulphur Creek. The Flood project included river channel improvements, a levee and floodwall construction. Subsequent to installation of flood improvements, FEMA approved a Letter of Map Revision (LOMR) effectively updating the flood insurance rate map (FIRM) and respective flood sensitive areas. The revised map went into effect on November 5, 2012. Both the Greystone and the Vineyard Lodge project sites are located outside of the 100 year floodplain and in FEMA Flood Zone X, as delineated on map number 06055C0263E.</p> <p>Section 402 of the Clean Water Act regulates the discharge of pollutants to waters of the US. Locally, this is implemented through the National Pollution Discharge Elimination System (NPDES) General Permit. The NPDES General Permit Requirements address post-construction conditions resulting from development including through Low Impact Development (LID) requirements. Under LID requirements, new development and redevelopment including the subject project are required to mimic pre-developed conditions, protect water quality, and retain runoff from impervious surfaces onsite. Stormwater discharge, grading, and erosion control requirements are further described in the St. Helena Stormwater and Runoff Pollution Control ordinance (Municipal Code Chp. 13.32).</p> |                                                      |                                                    |                                    |                  |

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| <p>The City of St. Helena collects Storm Drainage Impact Fees which are assessed based on the square footage of new impervious surfaces as a means to offset any potential storm drainage impacts generated by development. Fees collected are used for ongoing maintenance of existing infrastructure and incremental expansion as envisioned by the City's stormwater control plan.</p> <p>Both the Greystone and Vineyard Lodge site are developed with existing storm drain drainage infrastructure that captures flows and convey runoff to storm drains and bioswale facilities. Development proposed at the Vineyard Lodge site will increase impervious surfaces relative to the existing condition. In order to accommodate increased impervious surfaces, the project plans include LID measures consistent with requirements including bio retention facilities and grass lined interceptor swales. As described in the Vineyard Lodge Stormwater Control Plan, the project follows the "Design Guidance for Stormwater Treatment and Control for Projects in Marin, Sonoma, Napa, and Solano Counties. Bioretention LID facilities meet the minimum 4% equivalent tributary area as specified by the NPDES permit.</p> <p><b>Hydrology and Water Quality Impact Discussion:</b></p> <p><b>3.9(a, f). (Water Quality and Degrade Water Quality) Less Than Significant Impact:</b> The CIA Campus Master Plan project applicant is required to file for coverage under the State Water Resources Control Board (SWRCB), Water Quality Order No. 2013-0001—DWQ, NPDES General Permit No. CAS000004 for Discharges of Storm Water Runoff Associated with Construction Activity (General Permit). Mandatory requirements cover construction activities including, but not limited to, clearing, grading, excavation, stockpiling, and reconstruction of existing facilities involving removal and replacement. Compliance is initiated through submittal of a Notice of Intent (NOI) to the State Water Resources Control Board (SWRCB) and carried out through a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP contains a site map, existing and proposed buildings, lots, roadways, storm water collection and discharge points, general topography both before and after construction, and drainage patterns across the project. The SWPPP must also identify Best Management Practices (BMPs) to protect storm water runoff.</p> <p>The installation of the bioretention, swales, and adherence to best management practices for erosion control during construction activities will ensure that water quality standards as prescribed by NPDES General Permit and the City of St. Helena Stormwater and Runoff Pollution Control ordinance and waste discharge requirements are met. No violations of any water quality standards or waste discharge requirements are expected.</p> <p>No other water quality degradations are expected to occur from the project development. Implementation of the required SWPPP will ensure that there are no other impacts to water quality due to the subject project. Pursuant to St. Helena Municipal Code and per condition of approval, implementation of a SWPPP is required prior to issuance of grading permit. As such, impacts are expected to be less than significant to water quality.</p> <p><b>3.9(b). (Groundwater depletion) Less Than Significant Impact:</b> The City has adequate water supply resources to accommodate development of the CIA Campus Master Plan Project without depleting, degrading or altering groundwater supplies or interfering substantially with groundwater recharge. The City acquires potable water supplies from three sources: 1) Bell Canyon reservoir, a surface water source, 2) the two Stonebridge Wells (deep groundwater sources fed by the Sonoma Volcanic aquifer), and 3) the City of Napa. There is one on-site well on the Greystone property which is used for landscape irrigation only and will continue to operate under the proposed project.</p> <p>The Greystone and Vineyard Lodge sites currently operate under an amended water use agreement, adopted per Resolution No. 2008-77. Under the Agreement 17.8 ac-ft./year is supplied to CIA at Greystone and 5.2 ac-ft./year is supplied to the Vineyard Lodge Site. The gross allotment between the two locations amounts to 23.1 ac-ft./year or 20,650 gallons per day (gpd). At present, both sites exceed the approved allotment. The average water use for the Greystone Campus during 2014/2015 indicate an annual water use of 18.78 ac-ft./year and the Vineyard Lodge site water use was 6.03 ac-ft./year for the same period. With proposed project improvements the water demand of the respective sites would be altered as a result of the proposed reconfiguration of uses and installation of new more efficient fixtures at both sites.</p> |                                                      |                                                    |                                    |                  |

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| <p>Under the proposed project, the Greystone Campus would generate a reduced demand of 11.51 ac-ft./year and the Vineyard Lodge would demand 8.98 ac-ft./year. Thus, the overall water use for the Greystone Master Plan under the proposed project would be 20.49 ac-ft./year, which is below the current water allotment of 23.1 ac-ft./year. Therefore, with the proposed project the water demand generated by the CIA Campus Master Plan would be within the allowed allocation. The project would not deplete groundwater supplies, result in a lowering of the aquifer or otherwise interfere with groundwater recharge. Therefore, impacts would be less than significant.</p> <p><b>3.9(c-d).(Drainage Pattern, Stormwater System and Runoff) Less Than Significant Impact:</b> The proposed project will not alter the course of a stream or river and the post development flow regime will largely mimic predevelopment conditions. A Stormwater Control Plan, dated June 21, 2016 was prepared by Summit Engineering to evaluate the pre and post-construction hydrological conditions to demonstrate that there will not be any increase in the Stormwater runoff volume or flow rate under the 10 year storm event; the post- curve number values, flowrate, and volume were shown to match the pre-project conditions.</p> <p>Pollutants from hardscape will be removed and runoff reduced through implementing Post-Construction Low Impact Design (LID) measures and through the use of bio-retention areas adjacent to each building at the Vineyard Lodge site and near new paved areas. Sidewalks and other impervious surfaces will be sloped or otherwise designed to direct stormwater in order to prevent pooling and disperse stormwater into bio-retention areas, and will not directly connect into the storm drain system until after they have had the opportunity to settle out and percolate. In addition to filtering and reducing the volume of water discharges from the introduction of impervious surfaces onsite, bio-retention areas are also designed to increase percolation and remove sediment from surface flows. With the proposed post construction LID measures, the introduction of new impervious surfaces onsite would not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site.</p> <p>Onsite drainage, consisting of appropriately sized pipes, is proposed to provide stormwater protection during storm events. The general direction and pattern of drainage proposed will match pre-development conditions. The project will not result in a drainage pattern that causes substantial erosion or siltation on- or off-site; nor will it result in flooding on- or off-site. Therefore, impacts to the drainage pattern, storm drain system and runoff as result of the proposed project would be less than significant.</p> <p><b>3.9(g-h). (Flood hazard Zone) No Impact:</b> Based on the Federal Emergency Management Agency's Flood Insurance Rate Map (FIRM) Panel 06055C0263E, both project sites are located in Zone X, or non-special flood hazard zone. The proposed project will not introduce a substantial flood hazard and will not impede or redirect flood flows. The project will not place housing or structures in a flood hazard area and, as a result, will not expose people or structures to risks related to flooding. As such, the project would have no impacts due to a flood hazard zone.</p> <p><b>3.9(i-j). (Levee, Dam failure, Inundation) No Impact.</b> The project site is not located within an area that could be affected a levee breach or dam failure, nor by seiche, tsunami, or mudflow. The Greystone Campus and Vineyard Lodge Housing sites are located near to, but outside of, dam inundation areas for nearby storage facilities including St. Helena Lower Dam (approximately 0.8 mile west of the site) and Bell Canyon Dam (approximately 2.5 miles north of the site). There are no substantial water bodies in the immediate vicinity of either project site. There will be no impact from inundation related to levee or dam failure as a result of project implementation.</p> <p><b>Mitigation Measures:</b> None required.</p> |                                                      |                                                    |                                    |                  |
| <b>9. LAND USE AND PLANNING. Would the project:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                      |                                                    |                                    |                  |
| a. Physically divide an established community?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                      |                                                    |                                    | ✓                |



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| b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                      | ✓                                                  |                                    |                  |
| c. Conflict with any applicable habitat conservation plan or natural community conservation plan?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                      |                                                    |                                    | ✓                |
| <p>Sources: St Helena General Plan, (1993); 2.0 Land Use and Growth Management; 6.0 Open Space &amp; Conservation Element</p> <p><b>Setting:</b> The City of St. Helena is divided into two distinct areas: a developed “urban service area” and a more, rural, agricultural area located around the periphery such that the City exhibits a rather traditional landscape whereby commercial land uses are concentrated in the City center and along SR 29, with residential development radiating outwards to the northeast and southwest. The outer edge of the urban service area is demarcated by the urban limit line (ULL) which is a parcel specific boundary that marks the limit of allowed urban development. The intent of the ULL is to discourage urban sprawl and promote sensitive development which preserves the rural and agricultural lands around the City.</p> <p>The Greystone Campus is located within the City of St. Helena Urban Limit Line (ULL), and exhibits a land use designation of Public; Quasi Public providing for agriculture uses, wineries and public; quasi-public uses, amongst others. The site is zoned W: HP: PD (Winery with Historic Preservation and Planned Development overlays) and subject to Use Permit No. 93-105. The applicant is requesting amendments to the use permit to allow for a re-configuration of interior educational facilities, introduction of new storage cave, and expansion of student enrollment from 200 to 300 students. The project does not propose any substantial changes to the existing culinary education use of the site and as such, it will remain in conformance with the applicable land use designations with only technical changes to the use permit.</p> <p>The Vineyard Lodge Housing site exhibits a General Plan land use designation of Agriculture, providing for, amongst other things, Public and Quasi-Public uses. The project is zoned PQP. As part of the project, the applicant is requesting variances to allow fewer parking spaces and a lesser setback than what is allowed under a strict interpretation of the Municipal Code.</p> <p>The proposed project is subject to land use policies outlined in the St. Helena General Plan which has been adopted for the purpose of avoiding or mitigating an environmental effect. Applicable policies are outlined below:</p> <p><b>Guiding Policies</b></p> <p>2.6.2 New development should be required to occur in a logical and orderly manner within well-defined boundaries, and be consistent with the ability to provide urban services.</p> <p>2.6.4 Permit infill development and higher densities within currently developed areas wherever possible to minimize and postpone the need for expansion of the Urban Service Area.</p> <p>2.6.5 Encourage the continuation of agricultural and low-intensity uses adjacent to the Urban Limit Line.</p> <p>4.8.1 Preserve historic buildings and landscapes throughout the City of St. Helena as an important component of the City’s heritage</p> <p>4.8.2 Where feasible adapt historic structures to modern uses to ensure their economic viability and to protect against possible loss.</p> <p><b>Impact Analysis:</b></p> <p><b>a. (Physical Division of An Established Community) No impact:</b> The Culinary Institute of America (CIA) at Greystone proposes a campus master plan to restructure and expand the educational facilities at the Greystone Campus (2555 Main Street) and expand student enrollment from 200 to 300 students. Also proposed is an underground storage cave and the installation of three modular storage units at the rear of the building. Concurrently, student housing facilities (dormitories)</p> |                                                      |                                                    |                                    |                  |

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| <p>at the Vineyard Lodge Site (830 Pratt Avenue) will be expanded to accommodate a total of 224 students.</p> <p>Division of an established community typically occurs when a new physical feature, in the form of an interstate or railroad, physically transects an area, thereby removing or severely limiting access within an established community. The division of an established community can also occur through the removal of an existing road or pathway which would reduce or remove access between a community and outlying areas. Given that the CIA Campus Master Plan project consists of the expansion of existing, allowed uses on what are previously developed sites, there is no expectation that the project would introduce an element that would cause the physical division of a community. Accordingly, the project will not generate any impacts.</p> <p><b>b.(Conflicts with Applicable Plans) Less than significant with Mitigation:</b> The proposed project activities at the Greystone Campus are allowed under the Public; Quasi-Public land use and Winery: Planned Development: Historic Preservation Overlay zoning district which specifically allows for educational uses. To expand enrollment, the applicant will be subject to a new use permit which would ensure that enrollment and changes to interior operations are of an intensity that is consistent with the intent of the General Plan and Zoning Ordinance. No changes are proposed to the site that would otherwise be in conflict with any applicable plan or regulation.</p> <p>The Vineyard Lodge site exhibits a land use and zoning designation of PQP: Public-Quasi-Public. The PQP zoning designation does not prescribe specific development standards, but rather stipulates that all projects within the PQP zoning district be subject to a conditional use permit and that development standards shall be established through the use permit review process. These regulations help guarantee that incompatible development and/or activities can be avoided by requiring such projects be held to a high level of scrutiny and are vetted through the public review process, CEQA review, and be conditioned accordingly. The Vineyard Lodge Housing Component will be subject to the provisions of a new use permit as required under PQP zoning which would govern the intensity and operation of the site to an extent that consistency with all applicable standards and guidelines is achieved.</p> <p><u>Variances</u></p> <p>Notwithstanding the use permit, the project is subject to other standard requirements stipulated by the Zoning Code, namely, parking and setback requirements which, given site constraints, the applicant maintains cannot be met. As such, the applicant has requested variances. The purpose of a variance is to allow deviation from a strict interpretation of the Code insofar as exceptional circumstances exist related to unusual shape, size, or condition of a property, because of adjacent land bordering a property, or enforcement of the respective standards would involve practical difficulties or undue hardship.</p> <p>Under Municipal Code Section 17.112.050 the Vineyard Lodge Housing site is subject to a special setback requirement of 36' which applies to the northwesterly side of Pratt Avenue extending from the railroad tracks to the Napa River. The Vineyard Lodge I building, proposed for demolition was previously developed within the 36' setback (encroaching 29 feet)<sup>3</sup>. However, in an effort not to increase non-conformance, the project proposes a setback of 20' from the property line. The applicant has identified that, based on site constraints, the project cannot meet the 36' special setback required under the Code. Given that the existing Vineyard Lodge I building is located within the 36' setback area, introduction of the replacement building would not result in a substantially greater impact relative to the existing condition (see Aesthetic analysis above). However, since the buildings location achieves a reduced setback of 20' rather than the required 36' setback, the applicant has applied for a variance to allow for the deviation from this Code provision.</p> <p>In addition, the project has requested a variance from the parking standards outlined in Municipal Code Section 7.124.30(A.3) and stipulated for "rooming, boarding, or lodging houses" (determined to be the closest applicable land use identified in the zoning code), which require two spaces for the "resident owner" and one space for each guest bed, for a total of 226 parking spaces based on this requirement for the gross total of 224 dormitory beds which would result at the Vineyard Lodge Housing Site. At present, the site features 85 parking spaces, but based on data provided by the applicant, only 31% of students have a demand for parking spaces. As described herein, the CIA provides a shuttle service to students for transport to and from the Vineyard Lodge to Greystone, as well as transport offsite. Staff, including cleaning and maintenance staff, are shared by both sites and as such, staff typically park at the Greystone site and are shuttled to the</p> |                                                      |                                                    |                                    |                  |

<sup>3</sup> Data provided by Summit Engineering, October 2016.

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| <p>Vineyard Lodge site as needed. Due in large part to the robust shuttle service, and supported by the rental car service also provided onsite, it has been identified that students do not heavily rely on individual vehicles. As such, the applicant is requesting that findings be made, either under a variance, or as part of the conditional use permit, to allow for 72 parking spaces (69 student spaces, and 3 spaces devoted to the rental cars) based on the unique operational characteristics of the land use and the expectation that only approximately 31% of student residents would be issued parking permits.</p> <p>To ensure that the number of available parking spaces equates with the demand, the Conditional Use Permit will include a condition capping the number of parking permits issued to be commensurate with the number of spaces available and prohibit overnight off site and street parking. The project will further be conditioned to prepare a Transportation Management Plan, subject to review and approval by the Planning and Community Improvement Director that details the operation of the Shuttle Service and rental cars. To further minimize reliance on vehicles and associated parking spaces and to ensure consistency with the St. Helena Bicycle Plan, the applicant shall be required to implement <b>Mitigation Measure LU-1</b> which requires at least five (5) on demand bicycles be made available to residents of the Vineyard Lodge Housing Site. The provision of on-demand bicycles will further reduce student's reliance on vehicles (and associated parking spaces) and promote use of alternative forms of transportation that better aligns with the City's transportation and sustainability goals. With approval of the requested variances for deviations from the zoning requirements for parking and setbacks, conditions of approval capping issuance of parking permits and requiring a Transportation Management Plan, and compliance with <b>Mitigation Measure LU-1</b>, the project will be in conformance with all applicable regulations and Land Use and Planning impacts would be reduced to levels less than significant.</p> <p><u>Growth Management System</u></p> <p>The City of St. Helena has a Growth Management system (GMS) which restricts the development of new market rate housing to nine (9) units per year. The category of "dormitories" is not explicitly referenced in the GMS and given that the dormitory use is not a residential development with units available to the open market and the proposed rooms are only available to students attending the CIA culinary program, it is determined that the GMS does not apply to the proposed project. Further, the dormitories serve as temporary student housing and would not be expected to induce growth of permanent residents.</p> <p><u>Conclusion</u></p> <p>The intensification of use at the Greystone Campus and Vineyard Lodge sites will occur on previously developed land that is well served by public services, nearby to transportation routes and commercial areas of the City. With approval of the requested variances for parking and setbacks at the Vineyard Lodge site and the implementation of <b>Mitigation Measure LU-1</b>, which will further reduce demand for vehicles and associated parking, the project will be and remain in conformance with all applicable land use standards. Therefore, impacts related to a conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project would be less than significant.</p> <p><b>C. (Conflict with any applicable habitat conservation plan) No Impact:</b> The project is not subject to a habitat conservation plan or a natural community conservation plan. There are no conservation plans that apply to the City of St. Helena. Therefore, the project will have no impact to any conservation plan or natural community plan.</p> <p><b>Mitigation Measures:</b></p> <p>LU-1. To minimize reliance on vehicles, the applicant shall provide a minimum of five (5) on-demand bicycles to be available to residents on an as-needed basis. If there is an increase in student demand for bicycles beyond the number provided, the applicant is required to increase the number of bicycles available for dormitory residents to meet the demand. Bikes shall be maintained in good functioning condition and be readily accessible to residents. The applicant shall provide a written statement detailing how the on-demand bike service will function for review and approval by the Planning and Community improvement Director prior to building permit issuance. The bikes shall be made available for use upon certificate of occupancy for whichever building is constructed first.</p> |                                                      |                                                    |                                    |                  |

Culinary Institute of America at Greystone (PL16-042)  
Vineyard Lodge Housing (PL16-043)  
Initial Study and Mitigated Negative Declaration

December 9, 2016  
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| <b>10. MINERAL RESOURCES.</b> Would the project:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                      |                                                    |                                    |                  |
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                      |                                                    |                                    | ✓                |
| b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                      |                                                    |                                    | ✓                |
| Sources: St Helena General Plan: Open Space and Conservation Element (6-5), (6-6); SMARA Maps, Napa County, 2008; Geotechnical Study Report prepared by RGH Consultants Inc., May 16, 2008; Geotechnical Engineering Study- Storage Caves: The Culinary Institute of America at Greystone 2555 Main Street, Prepared by Condor Earth Technologies, Inc., June 22, 2016; Lawson Geological Investigation, 1996; Bauer Geological Investigation, 2002, 2005.                                                                                                                                                                                                                                                                                                                                                                                                     |                                                      |                                                    |                                    |                  |
| <u>Setting:</u><br><p>The California Surface Mining and Reclamation Act of 1975 (SMARA) identifies mineral resources within California. These maps identify and classify mineral resources as to their relative value for extraction. According to the 1993 General Plan, surface materials in the St. Helena area are classified as "recent alluvium." The depth of the alluvium is likely to be in the range of 250 to 500 feet. Additionally, the General Plan states that there are no known mineral deposits of significance within the City with the exception of the aggregate (gravel) being mined from the stream bed of Sulphur Springs, which is west of SR 29 and not proximate to either of the project sites. To date, no aggregate mineral resources or other significant mineral resources have been mapped within the City of St. Helena.</p> |                                                      |                                                    |                                    |                  |
| <u>Impact Analysis:</u><br><p><b>a,b (loss of mineral resources/ recovery sites) No Impact:</b> The project site has not been delineated as a locally-important mineral resource recovery site on any plans or as a result of past geotechnical investigation performed at either of the project sites. As such, the project is not expected to result in the loss of availability of a known resource, including locally important mineral resources. Therefore, the project will have no impact to mineral resources.</p>                                                                                                                                                                                                                                                                                                                                    |                                                      |                                                    |                                    |                  |
| <b>11. NOISE.</b> Would the project result in:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                      |                                                    |                                    |                  |
| a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                      |                                                    | ✓                                  |                  |
| b. Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                      |                                                    | ✓                                  |                  |
| c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                      |                                                    | ✓                                  |                  |
| d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                      | ✓                                                  |                                    |                  |
| e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                      |                                                    |                                    | ✓                |
| f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                      |                                                    |                                    | ✓                |
| Sources: St Helena 1993 General Plan: Public Health and Safety Element (8-3); Culinary Institute of America Vineyard Lodge Noise Study, Prepared by ICF International, June 15, 2016.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                      |                                                    |                                    |                  |

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| <p><u>Setting:</u></p> <p>Noise is generally defined as unwanted sound. It is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). The sound pressure level is the most common descriptor used to characterize the loudness of an ambient (existing) sound level. The decibel (dB) scale is used to quantify sound intensity, but given that the human ear is not equally sensitive to all frequencies in the entire spectrum, noise measurements are weighted more heavily for frequencies to which humans are sensitive in a process called "A-weighting," written as "dBA" and referred to as "A-weighted decibels". In general, human sound perception is such that a change in sound level of 1 dB cannot typically be perceived by the human ear, a change of 3 dB is just noticeable, a change of 5 dB is clearly noticeable, and a change of 10 dB is perceived as doubling or halving the sound level.</p> <p>The primary noise sources within the St. Helena City limits include vehicular traffic, the Napa Valley Wine Train, and agricultural activities (e.g. Vineyard frost fans, pumps in isolated areas, fixed machinery, and heavy vehicle traffic during harvest). Noise sources also include hot air balloon flyovers and limited industrial activities, particularly the Sulphur Springs gravel mining operation on Sulphur Springs Creek. The Napa Valley Wine train tracks are located southwest of the Vineyard Lodge Project site, with passages occurring twice a day, seven days per week, at approximately 1pm and 2pm. The slow speed of the train and the short duration are such that the train is not considered a significant noise source.</p> <p>The City of St. Helena Municipal Code Section 8.24.010 (C), limits Construction activities which generate noise that can be heard at the property line of any parcel of real property within the city limits to between the hours of eight a.m. to five p.m. and delivery of materials/equipment and cleaning and servicing of machines/equipment shall be limited to seven a.m. to six p.m. Exceptions to these time restrictions may be granted by the public works director. No construction activities which generate noise that can be heard at the property line of any parcel of real property within the city limits are allowed on Sundays or Holidays. Operational noise levels are addressed by the General Plan's Noise Element according to land use type. For example, residential land uses are considered completely compatible with noise exposures of up to 55dBA and tentatively compatible in noise exposure areas of up to 60dBA.</p> <p>Traffic is the primary noise generator in the vicinity of the project sites. The Vineyard Lodge site is also subject to noise generated by agricultural activities on adjacent properties. To characterize noise levels at the Vineyard Lodge Housing Site, a Noise Study was prepared by consultants, ICF International, on June 15, 2016. Noise monitoring was conducted on the Vineyard Lodge project site to characterize existing noise levels in the project area. The Napa Wine Train was not operating during this time and the existing housing facilities were not occupied as students were on break. The measured noise levels therefore represent the lowest noise levels likely to be encountered in the area. Overall, the noise measurements indicate that the noise environment in the project area is generally quiet and consistent with the rural setting.</p> <p><u>Impact Analysis:</u></p> <p><b>a.(Exposure to Excessive Noise Levels) Less than Significant:</b> Traffic serves as the primary noise generator in the vicinity of the Vineyard Lodge Housing Site. Measurements taken on the project site indicate that existing traffic noise levels at the project site are in the range of 57 to 63 Ldn. The project is expected to add less than 8 trips to Pratt Avenue during the a.m. and p.m. peak hours. This would constitute a negligible increase in traffic noise of less than 0.5 dB which falls well below the threshold of a perceptible change of 3 dB. As such implementation of the proposed project will not substantially increase traffic noise in the area. Further, conventional building construction with windows closed is expected to reduce exterior noise by at least 20 dB at interior locations. Accordingly interior noise levels at the new facility are expected to be 45 Ldn or less which is in compliance with the City standard for interior noise. Activities at the Greystone Campus will not generate or expose receptors to excessive noise levels. Impacts would be less than significant.</p> <p><b>b. (Ground borne vibration or noise) Less than Significant:</b> Operation of heavy construction equipment, particularly pile driving</p> |                                                      |                                                    |                                    |                  |

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| <p>and other impacts devices such as pavement breakers create seismic waves that radiate along the surface of the earth and downward into the earth. These surface waves can be felt as ground vibration. Vibration from operation of this equipment can result in effects ranging from annoyance of people to damage of structures. Varying geology and distance will result in different vibration levels containing different frequencies and displacements. In all cases, vibration amplitudes will decrease with increasing distance.</p> <p>Perceptible ground-borne vibration is generally limited to areas within a few hundred feet of construction activities. As seismic waves travel outward from a vibration source, they excite the particles of rock and soil through which they pass and cause them to oscillate. The rate or velocity (in inches per second) at which these particles move is the commonly accepted descriptor of the vibration amplitude, referred to as the peak particle velocity (PPV).</p> <p>Construction at the Vineyard Lodge Housing site would occur approximately 75 feet from nearby residences. According to the Noise Study, construction activity would generate vibration that is barely to distinctly perceptible at the nearest residence but is not at a level that could cause damage to nearby structures. Because periods of perceptible vibration would be brief and temporary, the project is not expected to expose people to excessive groundborne vibration. Likewise, construction activity at the Greystone Campus would occur proximate to the onsite student housing. Cave construction would consist of excavating the tunnels using mechanical means (backhoe, milling head, and/or roadheader) and may result in ground borne vibration; however periods of perceptible vibration would be brief and temporary, the project is not expected to expose people to excessive ground borne vibration and impacts would be less than significant.</p> <p><b>c.(Permanent Increase in Ambient Noise Levels) Less than Significant:</b> As mentioned above, the City of St. Helena regulates the noise environment through Chapter 8.25 of the Municipal Code, which identifies noise levels of 55 CNEL as completely compatible and provides that noise levels up to 60 CNEL are tentatively compatible for residential land uses.</p> <p>At project operation, the onsite land use at the Vineyard Lodge Housing Site and associated noise environment will continue to be typical of a multi-unit development (dormitories) and subject to the City' noise exposure standards. The expansion of the Vineyard Lodge Housing site is not expected to introduce a substantial permanent increase in the ambient noise environment due to activities onsite or as a result of stationary or mobile sources. The noise generating elements of the proposed project such as outdoor conversations, mechanical equipment, the operation of landscaping equipment, car engines and car doors would be similar to the existing noise environmental present on-site. The project is expected to introduce noise elements at levels that are generally consistent with the ambient noise conditions.</p> <p>New mechanical systems associated with heating, ventilation, and air conditioning may generate noise. The specific details on the design and location of these systems has not yet been determined. However, per Municipal Code Section 8.24.10(b), no commercial or other activity may create noise that can be heard at the property line of any private property between the hours of 10:00 p.m. and 7:00 a.m. As such, the project must shield/ attenuate noise generated by mechanical systems to comply with the Standard City requirements. With the requisite adherence to City Code provisions, there is no expectation that the proposed mechanical systems would generate a level of noise that would adversely impact adjacent properties.</p> <p>The facility will have a central quad area that may be used as a gathering place for students. Events such as barbeques and other social events could be held in the quad. Gatherings could include up to 120 students who would live on the site which would equate to a cumulative sound level of approximately 54 dBA at 50 feet. The nearest residence is about 260 feet from the center of the quad. A sound level of 54 dBA at 50 feet would drop to about 47 dBA at 260 feet assuming attenuation of 6 dB per doubling of distance. In addition the new buildings will surround the quad providing acoustical shielding of at least 5 dB between the quad and the nearest residence. The resultant sound level at the nearest residence would therefore be approximately 42 dBA. This is well below the measured daytime ambient sound levels that are in the range of 50 to 64 dBA. In addition, the CIA regulates activities at the Vineyard Lodge Housing Site to prohibit amplified music outside, enforces a 9:30pm n noise curfew, and prohibits non-residents from attending events in the quad.</p> |                                                      |                                                    |                                    |                  |

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| <p>Given the presence of this acoustical shielding and the rules that will be in place and required under the Use Permit, student activities are not expected to result in noise that can be heard at the property line between the hours of 10:00 p.m. and 7:00 a.m. Accordingly, the proposed Vineyard Lodge Housing project is not expected to result in noise that exceeds applicable local noise standards. This impact is therefore considered to be less than significant.</p> <p>Following implementation of the proposed changes at the Greystone Campus, interior and exterior noise levels would be similar to existing conditions. In other words, operational noises are not expected to generate additional sources of noise at the Greystone Campus and no impacts are expected.</p> <p><b>d.) (Temporary Increase in Ambient Noise) Less than Significant with Mitigation:</b> The City's Noise Ordinance establishes standards to minimize the temporary noise impacts associated with construction, such as limitations on the time of day and week when construction activities are acceptable. Construction activities associated with the CIA Campus Master Plan would result in temporary noise disturbances that could potentially impact nearby sensitive receptors due to the site's proximity to surrounding residential development. Noise generated during construction would vary depending on the construction phase and the type and amount of equipment used at the construction site. Construction activities that would generate noise include site grading, excavation, hauling and deliveries, foundation work, and to a lesser extent framing, and exterior and interior finishing. The highest noise levels would be generated during grading of the site, with lower noise levels occurring during building construction and finishing. No pile driving, jack hammering, or extensive work that would generate substantial groundborne vibration is anticipated.</p> <p>Construction activities associated with the proposed project have the potential to result in temporary noise levels that would impact nearby noise sensitive land uses periodically over the course of the construction period. Construction related noise impacts are typically only occasionally intrusive and cease once construction is complete. Nonetheless, in order to ensure that noise levels due to onsite construction are minimized <b>Mitigation Measure NOI-1</b>, set forth below shall be implemented. NOI-1 below, which goes beyond the requirements of the City's Noise Ordinance, will ensure that potential noise impacts due to the temporary exposure of sensitive receptors to excessive noise during construction are reduced to less than significant levels.</p> <p><b>(e-f) No Impact</b></p> <p>The proposed project is not located within two miles of a public airport or public use airport, nor is it located near a private airstrip and does not expose people residing or working in the project area to excessive noise levels. Residents or visitors onsite would not be exposed to excessive noise levels generated by the airport and no impacts due to excessive noise exposure would occur.</p> <p><b>Mitigation Measures:</b></p> <p>NOI-1. Due to the proximity of sensitive receptors to the project sites, all construction activities shall be required to comply with the following and be noted accordingly on construction contracts:</p> <ol style="list-style-type: none"> <li>1. Construction Equipment Mufflers and Maintenance: All construction equipment powered by internal combustion engines shall be properly muffled and maintained.</li> <li>2. Idling Prohibitions: All equipment and vehicles shall be turned off when not in use.</li> <li>3. Unnecessary idling of internal combustion engines is prohibited.</li> <li>4. Equipment Location and Shielding: All stationary noise-generating construction equipment, such as air compressors, shall be located as far as practical from the adjacent homes.</li> </ol> |                                                      |                                                    |                                    |                  |



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| <p>5. Acoustically shield such equipment when it must be located near adjacent residences.</p> <p>6. Quiet Equipment Selection: Select quiet equipment, particularly air compressors, whenever possible. Motorized equipment shall be outfitted with proper mufflers in good working order.</p> <p>7. Staging and Equipment Storage: The equipment storage location shall be sited as far as possible from nearby sensitive receptors.</p> <p>8. Noise Disturbance Coordinator: Applicant shall designate a "noise disturbance coordinator" who will be responsible for responding to any local complaints about construction noise. This individual would most likely be the contractor or a contractor's representative. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and would require that reasonable measures warranted to correct the problem be implemented. The telephone number for the disturbance coordinator shall be conspicuously posted at the construction site.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                      |                                                    |                                    |                  |
| <b>12. POPULATION AND HOUSING.</b> Would the project:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                      |                                                    |                                    |                  |
| a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads and other infrastructure)?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                      |                                                    |                                    | ✓                |
| b. Displacing substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                      |                                                    |                                    | ✓                |
| c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                      |                                                    |                                    | ✓                |
| <p><u>Discussion:</u> A project will normally have a significant environmental effect if it will displace a large number of people or induce substantial growth or concentration of population. The CIA Campus Master Plan involves an expansion in student enrollment from 200 to 300 students for a net increase of 100 new students plus the addition of seven new instructional staff. Concurrently, 49 employees would relocate to the recently acquired American Center for Wine, Food &amp; the Arts (Copia) in the City of Napa, California. The net change in student and faculty at the Greystone Campus would amount to a net increase of 58 students and staff. The Vineyard Lodge Housing would be expanded by a net total of 123 student residents.</p> <p><u>Impact Analysis</u></p> <p><b>a.(Population Growth) Less than Significant:</b> The proposed project would increase the number of students from 200 to 300 (a total of 100 new students). Project construction activities at the Vineyard Lodge Housing site would result in a maximum occupancy of 224 student residents on-site, which equates to a net increase of 123 students. With the Greystone Guest House, which provides housing for 47 students, the project will be able to provide housing for 271 of its 300 students. The project would generate a net decrease in faculty. Given that the project will result in a net decrease in faculty, while providing housing for the majority of students, the project is not expected to significantly impact the existing or future housing supply in St. Helena. Accordingly, impacts will be less than significant.</p> <p><b>b,c.(Displacement of Housing) No Impact:</b> Project construction activities at the Vineyard Lodge Housing site include the demolition of Vineyard Lodge I. However, three new residential building units would be constructed, resulting in a net increase of 123 students on the project site. Therefore, the proposed project would not displace people or existing housing</p> |                                                      |                                                    |                                    |                  |

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| that would require the construction of replacement housing elsewhere. No impacts are expected.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                      |                                                    |                                    |                  |
| <b>Mitigation Measures:</b> None Required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                      |                                                    |                                    |                  |
| <b>13. PUBLIC SERVICES.</b> <i>Would the project:</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                      |                                                    |                                    |                  |
| a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services including:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                      |                                                    |                                    |                  |
| i) Fire Protection?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                      |                                                    | ✓                                  |                  |
| ii) Police Protection?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                      |                                                    | ✓                                  |                  |
| iii) Schools?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                      |                                                    | ✓                                  |                  |
| iv) Parks?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                      |                                                    | ✓                                  |                  |
| v) Other Public Facilities?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                      |                                                    | ✓                                  |                  |
| <p><u>Setting</u></p> <p>Lands within the St. Helena City limits are well served by established public services including fire and police protection, schools and parklands. In order to offset the cost of improving or expanding City services to accommodate the demand generated by new development the City charges one-time impact fees on new private development. Development impact fees are necessary in order to finance required public service improvements and to pay for new development's fair share of the costs necessary to maintain acceptable levels of service related to fire and police protection services, open space, parkland and other such public services.</p> <p><u>Impact Analysis</u></p> <p><b>a,b.(Fire and Police Protection) Less than Significant Impact:</b> The project sites are located within or near the urban limit line and proximate to the police and fire stations and are currently well served by public services. Additional fire service and police calls may occur as a result of the project. However, the project will be subject to the payment of development impact fees, including the Public Safety Impact Fee which funds equipment and facilities' costs for Police and the Fire Departments that may go towards vehicles, capital equipment, and building improvements so as to maintain a high level of public safety. Accordingly, any impacts will be less than significant.</p> <p><b>c. (Schools) Less than Significant Impact:</b> The St. Helena Unified School District provides K-12 public educational services for the community. The District operates four schools, including a primary school, an elementary school, a middle school, and a high school. The CIA Campus Master Plan involves an expansion in student housing of 123 new student residents. A very limited number of the new residents may have school-aged children. Given that the CIA has moved towards and AOS degree program, most of the students are of college age and do not have school aged children. As such, it is expected that the St. Helena Unified School District would be able to accommodate any limited increase in new school-aged children that could be generated as a result of project implementation. Therefore, impacts would be considered less than significant.</p> <p><b>d. (Parks) Less Than Significant Impact:</b> The Parks Division of the Public Works Department maintains ten parks, four pathways, street trees, benches, and parking lots. These parks include a variety of recreational open spaces including walking trails, playgrounds, and picnic areas. The nearest park to both project sites is Lyman Park, located approximately 0.7 mile southeast of</p> |                                                      |                                                    |                                    |                  |

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| <p>the Greystone Campus and approximately 0.5 mile south of the Vineyard Lodge Housing site. The net increase in 123 new residents would result in an increase in the local population that would use community parks.</p> <p>The General Plan identifies a low ratio of active parkland to population, as well as limited connection between passive and active recreational areas and developed areas of the City. The applicant is required to pay a civic improvement fee which is required of all new development to assist in amongst other things, the development and maintenance of recreational facilities in the community. Further, per <b>Mitigation Measure TRANS-2</b>, the applicant is required to install bike lane improvements on the portion of Pratt Avenue between the Vineyard Lodge Housing Site and the Pratt Avenue/ Highway 29 intersection, thereby helping to alleviate pressure on the City's parks and recreational facilities. Accordingly, with payment of impact fees and improvement of passive recreational facilities as required under <b>Mitigation Measure TRANS-2</b>, impacts related to maintaining service ratios and performance objectives related to park and recreational facilities would be less than significant.</p> <p><b>e. (Other Public Facilities) Less than Significant Impact:</b> The Project will not result in substantial adverse impacts associated with any other public facilities. The project sites are located within or adjacent to the urban limit line and are well served by existing public utilities. The project will not generate a substantial increase in demands that warrant the expansion or construction of new public facilities. Therefore, any impacts to other public facilities will be less than significant.</p> <p><b>Mitigation Measures:</b> None required.</p> |                                                      |                                                    |                                    |                  |
| <b>14. RECREATION.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                      |                                                    |                                    |                  |
| a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                      |                                                    | ✓                                  |                  |
| b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                      |                                                    |                                    | ✓                |
| Sources: St. Helena 1993 General Plan: Parks and Recreation Element; St Helena General Plan, Appendix C: Inventory of Recreation Resources                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                      |                                                    |                                    |                  |
| <p><u>Setting</u></p> <p>St Helena provides twenty acres dedicated to recreational activities at five locations within the city's limits. Elementary school and high school facilities within the ULL are also utilized to help meet the community's recreational needs. Two nearby adjacent California State parks offer an additional 1,900 acres of camping, swimming, and hiking trails for local residents and tourists.</p> <p>The Parks Division of the Public Works Department maintains ten parks, four pathways, street trees, benches, and parking lots. These parks include a variety of recreational open spaces including walking trails, playgrounds, and picnic areas. The nearest park to both project sites is Lyman Park, located approximately 0.7 mile southeast of the Greystone Campus and approximately 0.5 mile south of the Vineyard Lodge Housing site.</p> <p>The CIA Campus Master Plan involves a net increase of 123 new student residents which will be housed at the Vineyard Lodge Housing Site, equating to a slight increase in potential park users.</p> <p><u>Impact Analysis</u></p> <p><b>a. (Deterioration of Parks) Less Than Significant Impact:</b> The proposed project would result in a net increase of 123 new student residents. The General Plan identifies a low ratio of active parkland to population, as well as, limited connection</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                      |                                                    |                                    |                  |

Culinary Institute of America at Greystone (PL16-042)  
 Vineyard Lodge Housing (PL16-043)  
 Initial Study and Mitigated Negative Declaration

December 9, 2016  
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| <p>between passive and active recreational areas and developed areas of the City. In order to offset an increase in demand for recreational facilities and not further degrade the already stressed park and recreational systems, the applicant is required to pay a civic improvement fee which is required of all new development to assist in, amongst other things, the development and maintenance of recreational facilities in the community. Further, the project will be required to comply with <b>Mitigation Measure TRANS-2</b> requiring bike lane improvements along a portion of Pratt Avenue which will ensure the project aligns with the intent of the St. Helena Bicycle Plan, 2012. That particular stretch of bike path will provide linkage to pathways along Highway 29 and will contribute to the establishment of improved connectivity throughout the City which can be used for both passive and active recreational activities. Since the project is not expected to substantially increase the use of existing parks or other recreational facilities, and will introduce bike lane improvements along Pratt Avenue that will serve to improve recreational opportunities within the City, impacts to these amenities would be less than significant.</p> <p><b>b. (Additional Recreational Facilities) Less than significant Impact:</b> The project does not include active recreational facilities and does not require the construction or expansion of recreational facilities. Pursuant to <b>Mitigation Measure TRANS-2</b>, the applicant will be required to install bike lane improvements along Pratt Avenue between the Vineyard Lodge Housing Site and the Pratt Avenue/ Highway 29 intersection. The requisite improvements will be limited to previously disturbed areas and/or existing right-of-way and not expected to generate any adverse physical effects on the environment. Accordingly, any impacts would be less than significant.</p> <p><b>Mitigation Measures:</b> None Required.</p> |                                                      |                                                    |                                    |                  |
| <b>15. TRANSPORTATION/TRAFFIC. Would the project:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                      |                                                    |                                    |                  |
| a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                      | ✓                                                  |                                    |                  |
| b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                      |                                                    |                                    | ✓                |
| c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                      |                                                    |                                    | ✓                |
| d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersection) or incompatible uses (e.g., farm equipment)?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                      |                                                    |                                    | ✓                |
| e. Result in inadequate emergency access?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                      |                                                    |                                    | ✓                |
| f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                      | ✓                                                  |                                    |                  |
| <p>Sources: Traffic Impact Report: Culinary Institute of America Greystone Master Plan, prepared by Crane Transportation Group, November 17, 2016; Traffic Impact Report: Culinary Institute of America Vineyard Lodge Master Plan, prepared by Crane Transportation Group, November 2, 2016; St. Helena Bicycle Plan, 2012.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                      |                                                    |                                    |                  |

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| <p><u>Setting</u></p> <p>The City of St. Helena lies on a north-west/south-east axis, with State Route (SR) 29/Main Street serving as the main route for intercity and regional travel. SR 29 is a two- to four-lane rural highway that stretches through Napa County from Vallejo at Napa County's southern border to Lake County in the north; within the City of St. Helena, SR 29 is confined to two travel lanes. Since SR 29 is a major north-south thoroughfare for Napa County, heavy through traffic is typical along Main Street. The street network to the west of SR 29 is a grid pattern of residential blocks connected to SR 29 by a series of east-west streets connecting residential areas. To the east of SR 29, the grid network is discontinuous due to the lack of parallel facilities to SR 29 to connect the east-west roadways.</p> <p>Within the City of St. Helena, SR 29 serves as a two-lane north-south highway. At the Pratt Avenue tee intersection the roadway is 48 feet wide curb to curb. A 75-foot-long left turn lane is provided on the southbound SR 29 approach to Pratt Avenue. Curb, gutter and sidewalk line both sides of the highway at Pratt Avenue. North of Pratt Avenue there is a tree-lined, unsurfaced pedestrian path along the west side of the highway and an unsurfaced bicycle pedestrian path along the east side of the highway.</p> <p>Pratt Avenue serves as a two-lane collector that connects Main Street to Silverado Trail on the north side of the City and provides access to both residential and winery uses, but lacks any north-south connections outside of Main Street. Despite its function as a major connection to Silverado Trail and as a bypass to congested conditions on Main Street, traffic is limited due to the poor sight distance and turning radius on the narrow Pratt Avenue Bridge that crosses the Napa River. It is about 40 feet wide in the vicinity of SR 29. Pratt Avenue is stop sign controlled on its approach to SR 29 and the westbound approach lane is 20 feet wide, allowing left and right turning vehicles to separate. Fronting Vineyard Lodge, the Pratt Avenue travel lanes are about 25.5 feet wide, and along the north side (the Vineyard Lodge frontage), there is a 13-foot wide, 160+-foot long parking bay. Sidewalks are in place fronting the project site, but sidewalks are discontinuous along the north and south sides Pratt Avenue.</p> <p><u>Public Transit</u></p> <p>Public transit service is readily available throughout Napa County. The primary transit service in Napa County is provided by the VINE, a fixed-route bus service providing service to Calistoga, St. Helena, Napa, American Canyon, Yountville, and parts of unincorporated Napa County. Two routes pass through St. Helena along S.R. 29: routes 10 and 29. Route 10 provides service from Calistoga to Napa, including stops in St. Helena, Rutherford and Oakville, running seven days a week, all day and including weekends. Route 29, the Vine Express, is a commuter bus operating from early morning through late afternoon, Monday through Friday. The Vine Express extends from Calistoga to the Vallejo Ferry Terminal and El Cerrito BART. Service hours are Monday through Friday, 5:20 am to 9:10 pm, Saturday 6:00 am to 8:10 pm, and Sundays 8:30 am to 7:00 pm. The bus stops nearest the project site are two Route 10 northbound stops located at the Pratt Avenue/SR 29 (Main Street) intersection and opposite CIA Greystone, on the east side of the highway.</p> <p>The St. Helena Shuttle is an on-demand shuttle service available for a fee of \$1.00 per trip. Service is available Monday through Friday 7:00 am to 9:00 PM, Friday and Saturday 7:00 am to 11:00 pm, and Sunday (May through November) 11:00am to 9:00 pm. VINE Go is an origin to destination, shared ride service which provides demand response for persons with disabilities in the cities of Calistoga, St. Helena, Napa, American Canyon, the Town of Yountville and the unincorporated areas of Napa County. VINE Go is the ADA paratransit service complementary to the fixed route operators and runs at times corresponding to the fixed routes.</p> <p><u>Bike and Pedestrian Facilities</u></p> <p>State Route 29 (Main Street) northbound from Pratt Avenue, is proposed as a link in the planned countywide Vine Trail Alignment, with a Class I Multi-Use Bike Path northbound, extending past the CIA-Greystone facility, north as far as Calistoga. Just east of S.R. 29 (Main Street) on Pratt Avenue, the Vine Trail Alignment loops north to connect to a proposed York Creek Class I Multi-Use Bike Path, then rejoins S.R. 29 just north of Pratt Avenue. State Route 29 (Main Street) southbound is an</p> |                                                      |                                                    |                                    |                  |

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| <p>existing Primary Class II Bike Route and is proposed to have a Class II Bike Lane.</p> <p>Eastbound Pratt Avenue between State Route 29 (Main Street) and the railroad tracks is proposed to have a Class II Bike Lane; through this segment, westbound Pratt Avenue is proposed to have a Class I Multi-Use Bike Path and is a link in the planned Countywide Vine Trail Alignment. Eastbound Pratt Avenue between the railroad tracks and Silverado Trail, which includes the portion of Pratt Avenue fronting the Vineyard Lodge site, is proposed to have a Class III Bike Route. These facilities would connect with matching improvements on State Route 29 (Main Street) north of Pratt Avenue, and on Silverado Trail north and south of Pratt Avenue. Sidewalks are in place fronting the project site, but sidewalks are discontinuous along the north and south sides Pratt Avenue.</p> <p><i>The 1993 St. Helena General Plan prescribed the following City Roadway and Intersection Impact Criteria to identify potential impacts from proposed development projects:</i></p> <p>(a) All signalized intersections in St. Helena should maintain LOS C except along Main Street, where LOS D is permitted. Exceptions to this policy are that lower service levels shall be permitted at any location where the existing LOS does not meet this standard and in which case the LOS cannot be worsened any further.</p> <p>(b) All unsignalized intersections must maintain LOS C. If the LOS degrades below LOS C, an evaluation of the need for traffic signalization shall be undertaken according to standard Caltrans signal warrants as described below. If signals are not initially warranted, the location shall continue to be monitored for signal warrants on a regular basis.</p> <p><u>Impact Analysis</u></p> <p><b>a. (Plan, Policy Ordinance: Circulation System) Less Than Significant Impact with Mitigation:</b> The Traffic Impact reports (TIR) prepared by Crane Transportation for the Greystone site and Vineyard Lodge Site (dated November 17, 2016 and November 2, 2016) reviewed onsite circulation and access, and evaluated the Project's traffic impacts on the surrounding circulation network including two intersections in the project vicinity. Specifically, the analysis evaluated traffic impacts at the following unsignalized intersections:</p> <ol style="list-style-type: none"> <li>1. CIA Driveway/ SR HWY 29 EB</li> <li>2. Pratt Ave/ SR HWY 29 EB</li> <li>3. Pratt Ave/ SR HWY 29 WB</li> </ol> <p>The TIS evaluated existing conditions, existing plus project conditions, baseline/baseline plus project conditions (Yr 2018), and future/ future plus project conditions (Yr 2035). As described below, under existing conditions, all intersections are operating unacceptably at LOS D or worse, with the exception of CIA Driveway/ SR HWY 29 EB which is operating at LOS "C" under the AM peak hour scenario. The intersection LOS continues to deteriorate under all scenarios without the project. With the project, study intersections will improve slightly with the exception of Pratt Ave/ SR HWY 29 WB, which will operate unacceptably under LOS "F" during the AM and PM Peak hour with and without the project under both scenarios for baseline and Future conditions.</p> <p><u>Trip Generation</u></p> <p>As proposed, the CIA Master Plan project is expected to result in a net reduction in traffic trips. There are two reasons for the net decrease:</p> <ol style="list-style-type: none"> <li>1. With the acquisition of Copia 49 faculty and employees (and associated traffic trips) will be transferred to Napa and seven new faculty positions will be added at the Greystone Campus. As such, traffic trips associated with the CIA at Greystone would be reduced by 42 roundtrips.</li> <li>2. The applicant proposes to increase the size of shuttles employed from 14 and 22 to 22 and 32 seats, on an as-needed basis, which would accommodate the increased number of students (approximately 100) and therefore, the increase in enrollment/ housing would have a negligible change to traffic trips.</li> </ol> |                                                      |                                                    |                                    |                  |

|  |                                             |                                           |                              |               |
|--|---------------------------------------------|-------------------------------------------|------------------------------|---------------|
|  | Potentially Significant Impact, Unmitigated | Potentially Significant Impact, Mitigated | Less Than Significant Impact | No New Impact |
|--|---------------------------------------------|-------------------------------------------|------------------------------|---------------|

Accordingly, the project is expected to generate - (15) AM Peak Hour trips and -(21) PM Peak hour trips between Greystone and the Vineyard Lodge site. All new students are expected to reside at the Vineyard Lodge Housing site and therefore, no increase in students living off campus is expected. As such, there is no expected increase of trips generated by students living off campus.

Existing Conditions

With the exception of the CIA Driveway/ SR HWY 29 EB under the AM peak hour, all study intersections are operating unacceptably at LOS D or below during Am and PM peak hour traffic. With the addition of project-related trips to the existing conditions scenario, it is anticipated all study intersections will continue operating at the current level of service with very slight reductions in the seconds of delay. In accordance with 1993 GP significance criteria, if LOS of an unsignalized intersection degrades below LOS C, signal warrants shall be performed to determine need for signalization. According to the analysis, the intersections do not meet signal warrant thresholds under existing conditions.

**Table 4**  
**Summary of Existing and Existing plus Project Peak Hour Intersection LOS Calculations**

| Study Intersection Approach  | Existing Conditions                       |     |         |     | Existing plus Project |     |         |     |
|------------------------------|-------------------------------------------|-----|---------|-----|-----------------------|-----|---------|-----|
|                              | AM Peak                                   |     | PM Peak |     | AM Peak               |     | PM Peak |     |
|                              | Delay                                     | LOS | Delay   | LOS | Delay                 | LOS | Delay   | LOS |
| 1 CIA Driveway/ SR HWY 29 EB | 20.6                                      | C   | 29.3    | D   | 19.8                  | C   | 25.2    | D   |
| 2 Pratt Ave/ SR HWY 29 EB    | Driveway Intersection not yet operational |     |         |     |                       |     |         |     |
| 3. Pratt Ave/ SR HWY 29 WB   | 30.3                                      | D   | 39.3    | E   | 30.5                  | D   | 39.6    | E   |

Baseline Conditions

The project’s TIS reviewed baseline conditions (Yr 2018) in order to assess existing conditions in conjunction with projects that are expected to begin generating traffic in the foreseeable future (within two to three years). As shown in Table 5, under the “Baseline” scenario, all intersections will continue to operate unacceptably with the exception of the CIA Driveway/ SR HWY 29 intersection, which is expected to operate acceptably at LOS C under the AM peak hour scenario. Under “Baseline plus Project (YR 2018)” conditions, Table 5 shows that study intersections are expected to operate unacceptably with the exception of CIA Driveway/ SR HWY 29, during the AM peak hour which is projected continue operating acceptably at LOS C.

The project’s contribution to the study intersections would result in a minor improvement to the existing LOS, with the exception of Pratt Avenue/ SR HWY 29 WB where the addition of four (4) trips would further degrade the LOS under the AM and PM peak hours. Given the degraded LOS under Baseline conditions, a warrant analysis was undertaken. Under baseline conditions with and without the project, the intersections would not meet warrant thresholds. Given that the project would not degrade the LOS to the next lowest level at any of the study intersections impacts would be less than significant.

**Table 5**  
**Summary of Baseline and Baseline plus Project Peak Hour Intersection Calculations ( YR 2018)**

| Study Intersection Approach   | Baseline Conditions |     |         |     | Baseline plus Project |     |         |     |
|-------------------------------|---------------------|-----|---------|-----|-----------------------|-----|---------|-----|
|                               | AM Peak             |     | PM Peak |     | AM Peak               |     | PM Peak |     |
|                               | Delay               | LOS | Delay   | LOS | Delay                 | LOS | Delay   | LOS |
| 1 CIA Driveway/ SR HWY 29     | 21.8                | C   | 32.0    | D   | 20.9                  | C   | 27.2    | D   |
| 2 Pratt Ave/ SR HWY 29 EB     | 35.9                | E   | 36.4    | E   | 35.1                  | E   | 35.4    | E   |
| 3. Pratt Avenue/ SR HWY 29 WB | 64.0                | F   | 93.4    | F   | 64.0+                 | F   | 93.4+   | F   |



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                      |                                                    |                                    |                  |                     |     |         |     |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Potentially<br>Significant<br>Impact,<br>Unmitigated | Potentially<br>Significant<br>Impact,<br>Mitigated | Less Than<br>Significant<br>Impact | No New<br>Impact |                     |     |         |     |
| <u>Future Conditions</u><br>The TIS reviewed future conditions for study intersections through applying a growth factor of 2.2 to the existing traffic volumes at all study intersections to project future volumes. As shown in Table 6 below, under future conditions without the project, it is expected that all study intersections will operate unacceptably at LOS E or worse. Under the Future plus Project scenario, Table 6 shows that, although the project would slightly improve the LOS at some intersections, all study intersections would continue to operate unacceptably at LOS “D” or worse. |                                                      |                                                    |                                    |                  |                     |     |         |     |
| Table 6<br>Summary of Future and Future Plus Project Peak Hour Intersection Calculations (YR 2035)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                      |                                                    |                                    |                  |                     |     |         |     |
| Study Intersection<br>Approach                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Future Conditions                                    |                                                    |                                    |                  | Future plus Project |     |         |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | AM Peak                                              |                                                    | PM Peak                            |                  | AM Peak             |     | PM Peak |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Delay                                                | LOS                                                | Delay                              | LOS              | Delay               | LOS | Delay   | LOS |
| 1 CIA Driveway/ SR HWY 29                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 37.4                                                 | E                                                  | 82.7                               | F                | 34.9                | D   | 57.8    | F   |
| 2 Pratt Ave/ SR HWY 29 EB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 87.1                                                 | F                                                  | 92.1                               | F                | 83.6                | F   | 88.3    | F   |
| 3. Pratt Ave/SR HWY 29 WB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 518                                                  | F                                                  | 867                                | F                | 518+                | F   | 867+    | F   |

Signal Warrants  
Pursuant to 1993 General Plan significance criteria and at the direction of the City, the traffic consultant performed a traffic warrant analysis for the project study intersections. The warrants were based on the California Manual on Uniform Traffic Control Devices (CAMUTCD). The consultant applied the peak hour warrant (warrant 3) to the Pratt Avenue/SR HWY 29 intersection; which is often used as an initial check for signalization given the peak hour volume data is readily available and that warrant 3 is often the first one to be met. In addition, Warrant 1 (highest eight hour volumes) and Warrant 7 (Accidents) were performed. The TIS concludes that under scenarios *without* the project, the study intersections would not meet the signal warrant criteria for warrants 1, 3, or 7. Under the future plus project scenario, the projected volumes *approach* meeting signal warrant criteria 1 and 3, they do not, however, meet or exceed the thresholds. As such, signalization is not required under any of the traffic scenarios analyzed.

Tourist Generated Traffic Impacts  
As a tourist destination, the Greystone Campus does exhibit regular visitation by buses. While, this visitation may decrease with the relocation of many CIA activities to the former COPIA site in Napa, it is expected that buses will continue to arrive at the Greystone site at least on an occasional basis. Given the buses ability to impede traffic flow along SR 29 the applicant will be required to comply with **Mitigation Measure TRANS-1** which will require buses to make reservations and obtain prior approval from the Culinary Institute to visit the Greystone Campus. The requirement for prior approval shall be clearly indicated on the school’s website, promotional materials, and on signage at the entrance to Greystone prohibiting entry by buses without prior approval from the CIA. These measures will ensure that buses visiting the Greystone site will not inadvertently impede traffic flow along SR 29 and congestion will be further minimized. With **Mitigation Measure TRANS-1**, the projects impacts to the level of service at affected intersections will be less than significant.

Conclusion  
As described above, the project will not degrade any of the intersections to the next lowest level of service, particularly those exhibiting an LOS C or better, nor will the project generate volumes such that signal warrant criteria would be satisfied. Further, with **Mitigation Measure TRANS-1**, all buses visiting the Greystone site will require advance reservations to visit the Greystone Campus and this stipulation shall be clearly indicated on the CIA’s website and indicated on signage at the Greystone site entrance so as to prevent buses from causing traffic impediments. As such, with **Mitigation Measure TRANS-1**, traffic impacts are expected to be less than significant.

**(b) (Congestion Management Plan) No Impact:** Napa County has not adopted a Congestion Management Plan. As such, the proposed project would not exceed, either individually or cumulatively, a level of service standard established by the County

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| <p>Congestion Management Agency for designated roads or highways. No further analysis of this issue is required.</p> <p><b>(c) (Air Traffic Patterns) No Impact:</b> There are no airports in St. Helena. The closest airports are Angwin-Parrett Field (8.5 miles away), a public use general aviation airport located in Angwin; Napa County Airport, a public airport located in Napa (25 miles away); and Charles M. Schulz Airport (27 miles away), a public airport located in Santa Rosa. The project will have no impact on air traffic patterns, given the nature and location of the project, which is well outside of the established airport flight pattern.</p> <p><b>(d) (Design Feature Hazard) Less Than Significant Impact:</b> The project's TIS reviewed the adequacy of sight distance for vehicles exiting the project access driveways on Pratt Avenue; no changes are proposed for the Greystone driveway and therefore, it was not analyzed. Per the Caltrans <i>Highway Design Manual</i> the recommended site distance prescribed for minor-street approaches to driveways is based on stopping site distance using the approach travel speeds as the basis for determining appropriate site distance.</p> <p>Pratt Avenue exhibits a posted speed limit of 30 feet and therefore warrants a minimum stopping site distance of 200 feet. At higher speeds, up to 50 mph, the required stopping site distance would increase to 430 feet. At Pratt Avenue sight lines to the east and west extend beyond 500 feet and as such, site distance is expected to be adequate. The project's design provides sufficient set back from roadways and maintains visibility around corners. The preliminary landscaping plan considers visibility in the location of proposed trees and shrubbery. As proposed, there are no hazards that impede or block visibility or represent an incompatible design feature. Therefore, the project will have less than significant impact resulting from site design hazards or inadequate site distance.</p> <p><b>(e) (Emergency Access) Less Than Significant Impact:</b> The project's internal circulation plan has been reviewed and meets all requirements of the St. Helena Public Works &amp; Utilities and Fire Departments. Site circulation was determined to be adequate, including sufficient street widths to allow for fire truck turn around and sufficient access to residential buildings. Therefore emergency vehicle access is adequate and potential impacts will be less than significant.</p> <p><b>(f) (Transit, Bicycle, and Pedestrian Facilities) Less Than Significant Impact with Mitigation:</b> There is no proposed aspect of the project that would directly decrease performance or safety of existing alternative transportation facilities. However, the absence of bike lanes along Pratt Avenue inhibit the use of alternative transportation and opportunities exist to improve consistency with the City's Bike and Pedestrian Plan and are addressed in more detail below under "Bicycle Facilities".</p> <p><u>Public Transit</u></p> <p>The primary transit service in Napa County is provided by the VINE, a fixed-route bus service providing service to Calistoga, St. Helena, Napa, American Canyon, Yountville, and parts of unincorporated Napa County. Two routes pass through St. Helena along S.R. 29: routes 10 and 29. Route 10 provides service from Calistoga to Napa, including stops in St. Helena, Rutherford and Oakville, running seven days a week, all day and including weekends. Route 29, the Vine Express, is a commuter bus operating from early morning through late afternoon, Monday through Friday. The Vine Express extends from Calistoga to the Vallejo Ferry Terminal and El Cerrito BART. The bus stops nearest the project site are two Route 10 northbound stops located at the Pratt Avenue/SR 29 (Main Street) intersection and opposite CIA Greystone, on the east side of the highway.</p> <p>Additional public transit facilities include the St. Helena Shuttle, an on-demand shuttle service available for a fee of \$1.00 per trip, and VINE Go is the ADA paratransit service complementary to the fixed route operators and runs at times corresponding to the fixed route shared ride service which provides demand response for persons with disabilities in the cities of Calistoga, St. Helena, Napa, American Canyon, the Town of Yountville and the unincorporated areas of Napa County. Given that the project provides a regular and consistent shuttle service and will provide three rental cars to students, there is no expectation that the project would negatively impact current public transit facilities in St. Helena.</p> |                                                      |                                                    |                                    |                  |

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| <p><b>Bike and Pedestrian Facilities</b></p> <p>State Route 29 (Main Street) northbound from Pratt Avenue, is proposed as a link in the planned countywide Vine Trail Alignment, with a Class I Multi-Use Bike Path northbound, extending past the CIA-Greystone facility, north as far as Calistoga. Just east of S.R. 29 (Main Street) on Pratt Avenue, the proposed Vine Trail Alignment loops north to connect to a proposed York Creek Class I Multi-Use Bike Path, then rejoins S.R. 29 just north of Pratt Avenue. State Route 29 (Main Street) southbound is an existing Primary Class II Bike Route and is proposed to have a Class II Bike Lane.</p> <p>Eastbound Pratt Avenue between State Route 29 (Main Street) and the railroad tracks is proposed to have a Class II Bike Lane; through this segment, westbound Pratt Avenue is proposed to have a Class I Multi-Use Bike Path and is a link in the planned Countywide Vine Trail Alignment. Eastbound Pratt Avenue between the railroad tracks and Silverado Trail, which includes the portion of Pratt Avenue fronting the Vineyard Lodge site, is proposed to have a Class III Bike Route. These facilities would connect with matching improvements on State Route 29 (Main Street) north of Pratt Avenue, and on Silverado Trail north and south of Pratt Avenue. Sidewalks are in place fronting the project site, but sidewalks are discontinuous along the north and south sides Pratt Avenue.</p> <p>In order to promote connectivity between the Vineyard Lodge Housing Site, Greystone Campus, and basic services and amenities in Downtown St. Helena, and to comply with the intent of the St. Helena Bicycle Plan, 2012, <b>Mitigation Measure TRANS-2</b>, will require that the applicant install a Class II Bike Lane along westbound Pratt Avenue in between the project site and the intersection with Main Street (SR29) and restripe for a fog line along the eastbound side of Pratt. It is determined that the requisite bike lane improvement would promote use of alternative forms of transportation while providing safe connectivity and also retaining the scenic qualities of the roadway. In addition, per <b>Mitigation Measure LU-1</b>, the applicant will provide at least five (5) on-demand bicycles to be used by residents of the Vineyard Lodge Housing Site which would provide a reliable source of bicycle transportation and help reduce reliance on fossil fuel burning vehicles. With <b>Mitigation Measures TRANS-1, TRANS-2, and LU-1</b>, included under the Land Use Section, the project will be consistent with the goals and objectives of the 1993 General Plan and St. Helena Bicycle Plan and impacts would be less than significant.</p> <p><b>Mitigation Measures:</b></p> <p>TRANS-1. Bus visitation shall require advance reservation and the size of buses allowed onto the Greystone property shall be limited to those which can successfully navigate the entrances to the property. This stipulation shall be clearly shown on (1) promotional materials and/or event flyers, (2) The Culinary Institute of America Website, and (3) On signage provided at the property entrance. The language employed shall be subject to review and approval by the Planning and Community Improvement Director in conjunction with the Chief of Police. Any physical signage shall be subject to the City's Sign Permit requirements enumerated in Municipal Code Section 17.148.</p> <p>TRANS-2. The applicant shall either (1) microsurface the full width of Pratt Avenue along the Project frontage extending to the intersection of SR29 (Main Street), introduce by thermoplastic a Class II bike lane along westbound Pratt Avenue (northern side) extending from the project site to the intersection of SR 29 (Main Street) and Pratt Avenue and restripe for a fog line along eastbound Pratt (southern side) extending from the project site to the intersection of SR 29 (Main Street) and Pratt Avenue in accordance with St. Helena Bicycle Plan, 2012, Appendix B – Design Standards for Class I, II, and III Bikeways OR (2) pay an in lieu fee of \$130,000 to provide funding for the City of St. Helena to perform the requisite improvements. For option (1) work shall be completed prior to Certificate of Occupancy for whichever building is constructed first or for option (2) the in lieu fee shall be paid prior to issuance of building permit.</p> |                                                      |                                                    |                                    |                  |
| <p><b>16. Utilities and Service Systems.</b> <i>Would the project:</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                      |                                                    |                                    |                  |

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| a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                      |                                                    | ✓                                  |                  |
| b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                      |                                                    | ✓                                  |                  |
| c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                      |                                                    | ✓                                  |                  |
| d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                      |                                                    | ✓                                  |                  |
| e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                      |                                                    | ✓                                  |                  |
| f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                      |                                                    | ✓                                  |                  |
| g. Impact with federal, state, and local statutes and regulations related to solid waste?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                      |                                                    | ✓                                  |                  |
| <p>Sources: Wastewater Feasibility Study for Greystone, Prepared by Summit Engineering, Inc., June 15, 2016; Wastewater Feasibility Study for Vineyard Lodge, Prepared by Summit Engineering, Inc., June 15, 2016; Water Availability Analysis for Greystone and Vineyard Lodge, Prepared by Summit Engineering, Inc., June 14, 2016; Stormwater Control Plan for Vineyard Lodge, Prepared by Summit Engineering, Inc., June 21, 2016; Cal Recycle (<a href="http://www.calrecycle.ca.gov/SWFacilities/Directory/28-AA-0002/Detail/">http://www.calrecycle.ca.gov/SWFacilities/Directory/28-AA-0002/Detail/</a>).</p> <p><u>Setting</u></p> <p>The Greystone Campus and Vineyard Lodge Housing site are served by the following service providers:</p> <ul style="list-style-type: none"> <li>• Water supply and distribution: City of St. Helena</li> <li>• Wastewater collection and treatment: Markham Combined Wastewater System; City of St. Helena</li> <li>• Storm drainage: City of St. Helena</li> <li>• Solid waste service: Upper Valley Disposal and Recycling</li> <li>• Electrical and natural gas power: Pacific Gas and Electric Co.</li> </ul> <p><b>Wastewater</b></p> <p>The Greystone Campus discharges effluent to the privately owned Markham Combined Wastewater System (MCWS). The volume of wastewater entering this facility is regulated by Napa County Department of Environmental Management. The Vineyard Lodge Housing site discharges to the City of St. Helena's wastewater treatment system. The City's existing wastewater treatment plant capacity is limited by permit to 0.5 mgd per day during the three dry months of the year. The City has been notified by the Regional Water Quality Control Board that treatment plant upgrades and an amended permit are required. The capacity issues of the wastewater treatment plant are a function of nutrient load (intensity of effluent) and dry weather flow (amount of effluent). The Regional Water Quality Control Board has not requested that there be a moratorium on new connections to the treatment plant.</p> <p><b>Solid Waste</b></p> <p>Solid waste (including recyclable material) generated during project construction and operation would be collected by</p> |                                                      |                                                    |                                    |                  |

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| <p>Upper Valley Disposal and Recycling and delivered to the Clover Flat Landfill outside of Calistoga. The landfill is permitted to receive 600 tons per day and as of September 2012 had 2,870,000 cubic yards of capacity remaining,</p> <p><b>Water</b></p> <p>The City of St. Helena provides water to both project sites. The current water allotments authorized by the Agreements allocate an average of 15,900gpd to Greystone and 4,750gpd to the Vineyard Lodge Site. The total allotment across the two sites amounts to an average of 20,650 gpd or 23.1 acre feet per year. As part of the CIA Master Plan project, the applicant is requesting to rescind the two separate agreements and adopt a new joint water agreement which would redistribute the gross water allotment across the two sites while maintaining the current total allotment of 23.1 AF per year.</p> <p><u>Impact Analysis</u></p> <p><b>a.(Exceed Wastewater Treatment Requirements) Less Than Significant Impact:</b> The project is not expected to exceed wastewater treatment requirements set forth by the Regional Water Quality Control Board. To accommodate wastewater flows generated at the Greystone Campus, the existing onsite primary treatment would be used, including one 3,000 gallon grease interceptor, two 7,500 gallon settling tanks and one 6,000 gallon settling tank, and a pump sump and pump to convey the SS flows to the Markham Combined Wastewater System (MCWS) located at Markham Winery on SR 29, north of St. Helena. Improvements to the existing dishwashing and other kitchen facilities, including replacement with more water and energy efficient equipment, in addition to the closure of the WSGR would reduce the overall water and wastewater demand for the site. Taken together, the proposed improvements will lead to a net decrease in flows conveyed and treated at the MCWS and will be within the authorized discharge amount of 14,850 gpd.</p> <p>At the Vineyard Lodge Housing site, wastewater will be generated by dormitory restrooms, showers, and common areas. The project will utilize the existing sanitary sewer (SS). Effluent would undergo primary treatment in septic tanks and then be conveyed to the municipal sewer system through the existing 3" SS. The SS management system will be resized to accommodate a peak daily wastewater flow of approximately 9,520 gallons per day (gpd) which equates to a projected net increase of 1,960 gpd over existing capacity. The wastewater flows will be conveyed to the City of St. Helena Wastewater Treatment Plant, which has sufficient operating capacity to handle the additional flows generated at the Vineyard Lodge Housing site. Further, the project will be assessed the sewer impact fee which will help to maintain the existing system and contribute to the additional costs that will be incurred with the future expansion and upgrade of the wastewater treatment plant. Therefore, the project would not exceed wastewater treatment requirements and impacts would be less than significant.</p> <p><b>b.(New Wastewater treatment Facilities) Less Than Significant Impact:</b> There would be no new construction or expansion of domestic water or wastewater facilities as part of the proposed project. For the Greystone Campus, as stated above, wastewater flows are expected to decrease following project implementation. For the Vineyard Lodge Housing site, as stated above, the project would result in a net increase of 1,960 gpd of wastewater over existing flows. However, the City of St. Helena Wastewater Treatment Plant has sufficient operating capacity to handle the additional flows generated at the Vineyard Lodge Housing site. Further, a sewer impact mitigation fee will be assessed with the purpose of maintaining the existing system and to contribute to offset costs of future expansion and upgrade of the wastewater treatment plant. The sewer impact fee will be assessed against the dormitory project at the time of issuance of building permits, therefore, impacts would be less than significant</p> <p><b>c.(Require New Stormwater Drainage Facilities) Less Than Significant Impact:</b> New catch basin filters, storm drains, and a series of bio-retention facilities would be installed to accommodate stormwater flows at the Vineyard Lodge Housing site. The proposed stormwater facilities would follow the "Design Guidance for Stormwater Treatment and Control for Projects in Marin, Sonoma, Napa, and Solano Counties (DGSTC)", prepared for the Bay Area Stormwater Management Agencies Association (BASMAA). Bio-retention LID Facilities would be sized at a minimum of 4% of the equivalent tributary area, as specified in the Phase II Stormwater National Pollutant Discharge Elimination System (NPDES) Permit. Bio-retention LID</p> |                                                      |                                                    |                                    |                  |

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| <p>Facilities would vary in size depending on the impervious areas for which they serve and would be located adjacent to these areas. These facilities would be designed in accordance with the Bioretention Facility Design Criteria beginning on Page 4-3 of the DGSTC.</p> <p>Storm drains would be utilized throughout the project to direct stormwater from impervious areas, to the bioretention facilities at locations specified in the Stormwater Control Plan. The new pipes would be sized adequately to handle post project flow rates. Self-retaining areas would be designed in accordance with the criteria in “Areas draining to self-retaining areas” on page 4-2 of the DGSTC: a maximum ratio of two parts impervious to one part pervious area. Running parallel to the access drive, grass-lined interceptor swales would be utilized to convey and treat runoff from access drive. All swales would be designed to handle runoff from the 100-year storm event. In addition, the City of St. Helena collects Storm Drainage Impact Fees which are assessed based on the square footage of new impervious surfaces as a means to mitigating any potential storm drainage impacts generated by development. The proposed project is not expected to significantly increase runoff relative to the existing condition since the project site will be improved with an onsite storm drain system that conveys runoff to existing storm drain system with sufficient capacity. Therefore, the project is expected to result in less than significant impacts due to the expansion of existing storm water drainage facilities or construction of new facilities.</p> <p>Project activities at the Greystone Campus would be limited to the reconfiguration of interior uses and installation of a storage cave. Therefore, no new Stormwater facilities would be required at the Greystone Campus.</p> <p><b>d. (Sufficient Water Supplies) Less Than Significant Impact:</b> The CIA Campus currently operates under two separate water agreements. The current water allotments authorized by the amended Agreements allocate an average of 15,900 gpd to Greystone and 4,750 gpd to the Vineyard Lodge site. The total allotment across the two sites amounts to an average of 20,650 gpd or 23.1 acre-feet (AF) per year. Under the CIA Campus Master Plan, the applicant proposes to rescind the two separate agreements and adopt a new joint water agreement which would redistribute the gross water allotment across the two sites to accommodate the increase in housing at the Vineyard Lodge site, while maintaining the existing water allotment of 23.1af per year. Therefore, no new or expanded water entitlements are needed and impacts are considered less than significant.</p> <p><b>e. (Wastewater Treatment Capacity) Less Than Significant Impact:</b> As previously discussed under item a), the proposed improvements at the Greystone Campus will lead to a net decrease in flows conveyed and treated at the MCWS and will be within the authorized discharge amount of 14,850 gpd. Additionally, the City of St. Helena Wastewater Treatment Plant has sufficient operating capacity to handle the additional wastewater flows generated at the Vineyard Lodge Housing site. Therefore, the project will have less than significant impacts related to the adequacy or capacity of wastewater treatment facilities.</p> <p><b>f-g. (Landfill Capacity) Less Than Significant Impact:</b> During construction, the project would generate solid waste from building demolition, concrete and asphalt from the removal of existing impervious surfaces, and wood waste from tree removal. Consistent with the 2013 Cal Green Tier 1 Mandatory Measures, the applicant will be required to recycle or salvage at least 50 percent of nonhazardous construction and demolition waste and prepare a Construction Waste Management Plan that documents the diversion of materials as required by CalGreen. Accordingly, impacts associated with construction waste will be less than significant.</p> <p>At operation, the project would continue to generate additional solid waste. Although the waste stream generated by the project is expected to increase during construction and operation, it is not expected to exceed landfill capacity and is not expected to result in violations of federal, state, or local statutes and regulations related to solid waste. Therefore, implementation of the project will result in less than significant impacts to the local landfill’s permitted capacity for solid waste disposal, as well as federal, state, and local statutes and regulations.</p> <p><b>Mitigation Measures:</b> None Required.</p> |                                                      |                                                    |                                    |                  |

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| <b>XVII. Mandatory Findings of Significance.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                      |                                                    |                                    |                  |
| a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                      |                                                    | ✓                                  |                  |
| b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                      |                                                    | ✓                                  |                  |
| c. Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                      |                                                    | ✓                                  |                  |
| <p><b>a. (Degrade the Environment) Less Than Significant:</b> The project is consistent with the General Plan Land Use and goals, policies and programs. With implementation of mitigation measures set forth above under Aesthetics, Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Land Use, Noise, and Transportation, the project's potential impacts would be reduced to levels below significance. As such, the project will not degrade the quality of the environment, reduce habitat, or adversely affect cultural resources. Therefore, the project will have less than significant impacts due to degradation of the environment.</p> <p><b>b. (Cumulatively Affect the Environment) Less Than Significant Impact:</b> As described in the analysis above, potential environmental impacts are expected to remain at, or be mitigated to, less than significant levels. The project does not increase the severity of any of the cumulatively considerable impacts from the levels identified and analyzed in the General Plan EIR. Therefore, the project's cumulative impacts will be less than significant.</p> <p><b>c. (Substantial Adverse Effect on Humans) Less Than Significant Impact:</b> As reflected in the analysis above for each environmental topic, the project does not have the potential to result in substantial adverse impacts to humans. Therefore the project will have less than significant impacts due to substantial adverse environmental effects.</p> |                                                      |                                                    |                                    |                  |

**Technical Appendices:** The following resources were prepared in order to further identify project specific parameters. Copies of these technical documents are incorporated herein by reference and are available for review during normal business hours at the City of St. Helena. Questions or requests to review any of the technical appendices listed below may be directed to the project planner, Lilly Bianco, at lbianco@cityofsthenela.org.

- A. "BASMAA for Vineyard Lodge," prepared by Summit Engineering, June 21, 2016 and updated September 2, 2016.
- B. "Air Quality & Greenhouse Gas Emissions: Culinary Institute of America 830 Pratt Avenue," prepared by Gilleran Energy Management, Inc., September 26, 2016.
- C. "Air Quality & Greenhouse Gas Emissions: Culinary Institute of America at Greystone Rehabilitation," prepared by Gilleran Energy Management, Inc., September 26, 2016.
- D. "Drainage and Hydrology Analysis," prepared by Summit Engineering, September 2, 2016



- E. "Geotechnical Engineering Study – Storage Caves CIA at Greystone," prepared by Condor Earth Technologies, Inc., dated June 22, 2016
- F. "Geotechnical Study Report," prepared by RGH Consultants, Inc., dated May 16, 2008
- G. "Greystone Use Permit and Design Review Submittal Drawings," prepared by Architectural Resources Group, Delta 1, dated September 2, 2016.
- H. "Culinary Institute of America Greystone Wastewater Feasibility Study," prepared by Summit Engineering, June 15, 2016, revised September 2, 2016.
- I. "MWELo Landscape Documentation Package," prepared by Peter Wendt,
- J. "Phase 1 Environmental Site Assessment for 830 Pratt Avenue," prepared by Kleinfelder, dated December 15, 2003
- K. "Pratt Avenue Housing Use Permit and Design Review Submittal Drawings," by Architectural Resources Group, Delta 1 dated September 2, 2016
- L. "Culinary Institute of America Vineyard Lodge Noise Study," prepared by ICF Int., Jun 15, 2016
- M. "Roundabout Analysis," prepared by Summit Engineering, October 21, 2016.
- N. "Secretary of the Interior Standards for Rehabilitation Compliance letter," prepared by Architectural Resources Group, dated August 14, 2016.
- O. "Storm Water Control Plan For A Regulated Project," Culinary Institute of America Vineyard Lodge Use Permit (June 21, 2016)
- P. "Traffic Impact Study Culinary Institute of America Greystone Master Plan," Prepared by Crane Transportation Group, November 17, 2016.
- Q. "Traffic Impact Study Culinary Institute of America Vineyard Lodge Master Plan," Prepared by Crane Transportation Group, November 2, 2016.
- R. Tree Protection Guidelines and Specifications Developed for the Culinary Institute of America, 830 Pratt Avenue," prepared by Pacific Tree Care, September 2, 2016.
- S. "Vineyard Lodge 2 Hydraulic Calculations," prepared by Summit Engineering, December 11, 2008.
- T. "Vineyard Lodge Wastewater Feasibility Study," prepared by Summit Engineering, June 15, 2016, revised September 2, 2016.
- U. "Visual Impact Assessment," by Architectural Resources Group, dated August 17, 2016.
- V. "Water Availability Analysis for Greystone and Vineyard Lodge, prepared by Summit Engineering, June 14, 2016 and revised September 2, 2016.

# Mitigation Monitoring and Reporting Program

Culinary Institute of America Campus Master Plan

2555 Main Street

830 Pratt Avenue

| Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Implementing Responsibility | Monitoring Responsibility                                                   | Monitoring Schedule                                                             | Verification |
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| <b><u>AESTHETICS</u></b><br><br>AES-1. The final Landscape Plan and proposed vegetative screening shall be subject to review and approval by the Planning and Community Improvement Director prior to issuance of building permit so as to confirm consistency with approved plans.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Project Applicant           | St. Helena Planning Department                                              | Prior to building permit issuance                                               |              |
| <b><u>AIR QUALITY</u></b><br><br>AQ-1: The applicant shall incorporate Best Management Practices for all construction activities and clearly indicate these provisions in the specifications. In addition an erosion control plan shall be prepared and submitted to the City of St. Helena prior to any construction activity. BMPs shall include but not be limited to the BAAQMD Basic Construction Mitigation Measures as modified below: <ol style="list-style-type: none"> <li>1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered three times per day;</li> <li>2. All haul trucks transporting soil, sand, or other loose material shall be covered;</li> <li>3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited;</li> <li>4. All vehicle speeds on unpaved roads shall be</li> </ol> | Project Applicant           | St. Helena Planning and Building Department<br><br>St. Helena City Engineer | Prior to issuance of grading permit and Ongoing throughout project construction |              |

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| <p>limited to 15 mph;</p> <ol style="list-style-type: none"> <li>5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible;</li> <li>6. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used;</li> <li>7. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points;</li> <li>8. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation;</li> <li>9. Construction equipment staging shall occur as far as possible from existing sensitive receptors;</li> <li>10. The Developer shall designate a person with authority to require increased watering to monitor the dust and erosion control program and provide name and phone number to the City prior to issuance of grading permits. Post a publicly visible sign with the telephone number of designated person and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations; and</li> <li>11. The City's Public Works Inspector shall perform visual inspections during grading to assure that dust control is implemented and standard BMP are enforced.</li> </ol> |                   |                                             |                                   |  |
| <p><b><u>BIOLOGICAL RESOURCES</u></b></p> <p>BIO-1. All oaks proposed for removal from the Vineyard Lodge site shall be replaced in-kind and at a ratio of three (3) new 15 gallon trees for every tree removed. A portion of replacement oaks may be accommodated on the Greystone Campus if site constraints are such</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Project Applicant | St. Helena Planning and Building Department | Prior to building permit issuance |  |

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| <p>that all replacement trees cannot be accommodated within the proposed site plan. The final Landscape plan showing the location of replacement trees shall be subject to review and approval by the Planning and Community Improvement Director prior to issuance of building permit.</p> <p>BIO-2. The applicant shall comply with the recommendations of the "Tree Protection Guidelines and Specifications Developed for the Culinary Institute of America, 830 Pratt Avenue," prepared by Pacific Tree Care, September 2,2016.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Project Applicant | St. Helena Planning and Building Department | Prior to building permit issuance       |  |
| <p><b><u>CULTURAL RESOURCES</u></b></p> <p>CUL-1. If during the course of ground disturbing activities, including, but not limited to excavation, grading and construction, a potentially significant prehistoric or historic resource is encountered, all work within a 100 foot radius of the find shall be suspended for a time deemed sufficient for a qualified and city-approved cultural resource specialist to adequately evaluate and determine significance of the discovered resource, confer with tribal representative, as appropriate, and provide treatment recommendations. Should a significant archeological resource be identified a qualified archaeologist shall prepare a resource mitigation plan and monitoring program to be carried out during all construction activities.</p> <p>CUL-2. The project applicant shall authorize the Yocha Dehe Winton Nation Tribe or qualified archeological professional to observe and monitor earth-moving, grading, and/or excavation at the Vineyard Lodge Housing Site to the extent that such activities would disturb soil profiles located 10 to 15 feet below grade.</p> <p>CUL-3. In the event that paleontological resources, including individual fossils or assemblages of fossils, are encountered during construction activities all ground disturbing activities shall halt and a qualified paleontologist shall be procured to evaluate the discovery and make treatment recommendations.</p> | Project Applicant | St. Helena Planning and Building Department | Ongoing throughout project construction |  |

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| <b><u>GEOLOGY AND SOILS</u></b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                                                                                    |                                                                                                                                                                 |  |
| <p>GEO-1. All recommendations outlined in the Geotechnical Studies prepared by RGH (May 16, 2008) and by Condor Earth Technologies (dated June 22, 2016), including those related to site preparation and grading, excavation, seismic design, cave and tunnel design and foundation system design, are herein incorporated by reference and shall be adhered to insofar as they are applicable to the subject project and to ensure that construction of the proposed structures and buildings adequately accounts for the geotechnical particularities of the site. All recommendations are subject to review and approval by the City Engineer and may be modified at his/her discretion. Prior to Certificate of Occupancy, the geotechnical engineer shall inspect the site work and construction and shall certify in writing that the improvements have been performed in accordance with the Geotechnical Studies, or as modified by the City Engineer.</p> | Project Applicant | <p>St. Helena Planning and Building Department</p> <p>St. Helena City Engineer</p> | Prior to issuance of grading and building permits, as appropriate and ongoing throughout project construction                                                   |  |
| <b><u>LAND USE</u></b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                                                                                    |                                                                                                                                                                 |  |
| <p>LU-1. To minimize reliance on vehicles, the applicant shall provide a minimum of five (5) on-demand bicycles to be available to residents on an as-needed basis. If there is an increase in student demand for bicycles beyond the number provided, the applicant is required to increase the number of bicycles available for dormitory residents to meet the demand. Bikes shall be maintained in good functioning condition and be readily accessible to residents. The applicant shall provide a written statement detailing how the on-demand bike service will function for review and approval by the Planning and Community improvement Director prior to building permit issuance. The bikes shall be made available for use upon certificate of occupancy for whichever building is constructed first.</p>                                                                                                                                             | Project Applicant | St. Helena Planning and Department                                                 | To be approved Prior to issuance of building permit; implementation of Plan to begin prior to issuance of occupancy for whichever building is constructed first |  |
| <b><u>NOISE</u></b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |                                                                                    |                                                                                                                                                                 |  |
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| <p>NOI- 1 Due to the proximity of sensitive receptors to the project sites, all construction activities shall be required to comply with the following and be noted accordingly on construction contracts:</p> <ol style="list-style-type: none"> <li>1. Construction Equipment Mufflers and Maintenance: All construction equipment powered by internal combustion engines shall be properly muffled and maintained.</li> <li>2. Idling Prohibitions: All equipment and vehicles shall be turned off when not in use.</li> <li>3. Unnecessary idling of internal combustion engines is prohibited.</li> <li>4. Equipment Location and Shielding: All stationary noise-generating construction equipment, such as air compressors, shall be located as far as practical from the adjacent homes.</li> <li>5. Acoustically shield such equipment when it must be located near adjacent residences.</li> <li>6. Quiet Equipment Selection: Select quiet equipment, particularly air compressors, whenever possible. Motorized equipment shall be outfitted with proper mufflers in good working order.</li> <li>7. Staging and Equipment Storage: The equipment storage location shall be sited as far as possible from nearby sensitive receptors.</li> <li>8. Noise Disturbance Coordinator: Applicant shall designate a "noise disturbance coordinator" who will be responsible for responding to any local complaints about construction noise. This individual would most likely be the contractor or a contractor's representative. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and would require that reasonable measures warranted to correct the problem be implemented. The telephone number for the disturbance coordinator shall be</li> </ol> |  | <p>and Building Department</p> | <p>project construction</p> |  |
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| conspicuously posted at the construction site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                                             |                                    |  |
| <p><b><u>Transportation</u></b></p> <p>TRANS-1. Bus visitation shall require advance reservation and the size of buses allowed onto the property shall be limited to those which can successfully navigate the entrances to the property. This stipulation shall be clearly shown on (1) promotional materials and/or event flyers, (2) The Culinary Institute of America Website, and (3) On signage provided at the property entrance. The language employed shall be subject to review and approval by the Planning and Community Improvement Director in conjunction with the Chief of Police. Any physical signage shall be subject to the City's Sign Permit requirements enumerated in Municipal Code Section 17.148.</p> <p>TRANS-2. The applicant shall either (1) microsurface the full width of Pratt Avenue along the Project frontage extending to the intersection of SR29 (Main Street), introduce by thermoplastic a Class II bike lane along westbound Pratt Avenue (northern side) extending from the project site to the intersection of SR 29 (Main Street) and Pratt Avenue and restripe for a fog line along eastbound Pratt (southern side) extending from the project site to the intersection of SR 29 (Main Street) and Pratt Avenue in accordance with St. Helena Bicycle Plan, 2012, Appendix B – Design Standards for Class I, II, and III Bikeways OR (2) pay an in lieu fee of \$130,000 to provide funding for the City of St. Helena to perform the requisite improvements. For option (1) work shall be completed prior to Certificate of Occupancy for whichever building is constructed first or for option (2) the in lieu fee shall be paid prior to issuance of building permit.</p> | Project Applicant | St. Helena Planning and Building Department | Prior to building permit issuance. |  |



Attachment 8

**City of St. Helena**



# **Culinary Institute of America Campus Master Plan**

Response to Comments  
on the  
Draft Initial Study/Mitigated Negative Declaration

February 21, 2017

## **RESPONSE TO COMMENTS ON THE DRAFT INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION**

### **CULINARY INSTITUTE OF AMERICA CAMPUS MASTER PLAN GREYSTONE CAMPUS AND VINEYARD LODGE HOUSING**

This document provides responses to comments received on the Public Draft Initial Study/Mitigated Negative Declaration (IS/MND) for the Culinary Institute of America Campus Master Plan (hereinafter referred to collectively as the “project”). These responses address issues raised by the comments and clarify and reiterate discussion provided in the IS/MND. This document also includes corrections and additions to the IS/MND in response to comments received. These corrections and additions clarify or correct text in the IS/MND, but do not change the findings or conclusions of the analysis. This response to comments document along with the Draft IS/MND constitutes the Final IS/MND.

In accordance with the California Environmental Quality Act (CEQA) of 1970 (as amended) (California Public Resources Code 21000 et. seq.), the IS/MND was circulated for a 20-day public review and comment period from December 9 to January 3 and extended for another 20 days, until January 23, 2017, for a total comment period of 40 days. Twelve (12) comment letters were received on the IS/MND. To the extent possible, comment letters received outside of the public comment period were also responded to. As explained herein, in light of the whole record, the City of St. Helena finds that all potentially significant impacts have been adequately addressed in the IS/MND and this Response to Comments.

### **CEQA REQUIREMENTS**

CEQA Guidelines Section 15074 identifies the responsibilities of the Lead Agency when considering the adoption of a Negative Declaration or Mitigated Negative Declaration:

- (a) Any advisory body of a public agency making a recommendation to the decision-making body shall consider the proposed negative declaration or mitigated negative declaration before making its recommendation.
- (b) Prior to approving a project, the decision-making body of the lead agency shall consider the proposed negative declaration or mitigated negative declaration together with any comments received during the public review process. The decision-making body shall adopt the proposed negative declaration or mitigated negative declaration only if it finds on the basis of the whole record before it (including the initial study and any comments received), that there is no substantial evidence<sup>1</sup> that the project will have a significant effect on the environment and that the negative declaration or mitigated negative declaration reflects the lead agency’s independent judgment and analysis.

Consistent with CEQA requirements, the City of St. Helena has reviewed and considered all comments received on the IS/MND. CEQA does not require the lead agency to prepare a response to public comments received on a Negative Declaration or Mitigated Negative Declaration. Nevertheless, the City of St. Helena has prepared this document to fully disclose all public and agency comments received and to provide responses to those comments.

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<sup>1</sup> “Substantial evidence” includes facts, fact-related reasonable assumptions, and expert opinions based on facts. It does not include arguments, speculation, unsubstantiated opinion or narrative, clearly inaccurate or erroneous evidence, or socioeconomic impacts not related to the physical environment. (Pub. Res. Code Secs. 21080(e), 21082.2(c); Guidelines § 15384).

## ORGANIZATION OF THIS DOCUMENT

Section 1 includes a “List of commenters on the Draft IS/MND.” The comments received on the Draft IS/MND and responses to those comments are included in Section 2, “Responses to Public Comments.” Section 3 provides, “Revisions to the IS/MND,” which includes corrections and additions to the IS/MND. Corrections and additions to the IS/MND are shown in underline for new text added and in ~~striketrough~~ for text that was deleted. Section 4, “Summary” contains a summary of this responses-to-comments process and subsequent action by the City of St. Helena regarding the project.

### 1. LIST OF COMMENTERS ON THE DRAFT IS/MND

The MND was circulated for a 40-day public review period that began December 9, 2016 and concluded on January 23, 2017. The City of St. Helena received a total of 12 comment letters on the IS/MND (see commenters 1-12 below). Written comments received during the public review of the IS/MND were from the individuals listed below:

1. Tom Thurmond, December 23, 2016
2. Tom Belt, December 23, 2016
3. Celia Lenson, December 26, 2016
4. George Caloyannidis, December 26, 2016
5. Donna Hinds, January 11, 2017
6. Tom Rinaldi, January 11, 2017
7. Dianna Varozza, January 17, 2017
8. D Packman, January 9, 2017
9. Carol Norfleet, January 18, 2017
10. Anthony Micheli, January 13, 2017.
11. Paul Bertoli, January 19, 2017
12. Priscilla Dell, January 24, 2017

Section 2, below, provides the City’s responses to comments received. A number of written comments received conflate points and opinions relevant to the project’s merits with points pertinent to the potentially significant environmental effects of the project. As required under CEQA, the Response to Comments focuses on points relevant to the environmental review and limits discussion of comments related to the project’s merits and which do not directly relate to the adequacy of the environmental document. Pursuant to CEQA Section 15073, a lead agency is not required to prepare formal written responses to comments on a mitigated negative declaration. Nonetheless, the City has prepared formal responses in an effort to provide a greater level of clarity and disclosure.

Comment letters received on the IS/MND involved variations of many of the same themes. To avoid redundancy and fully address all comments and concerns, the City has prepared “Master Responses,” which serve as topical responses to address those comments replicated across comment letters. The Master Responses are followed by responses to individual comments letters and which address points not covered under any Master Response. The City reviewed and

considered all comments received. In no instance did the comments result in the identification of a new or previously unidentified significant impact.

**Master Responses on the IS/MND centered on the following issues:**

1. Aesthetics
2. Public Utilities
3. Traffic
4. Safety
5. Project Alternatives
6. Preparation of an EIR

**2. RESPONSE TO COMMENTS RECEIVED**

**MASTER RESPONSE 1. AESTHETIC IMPACTS**

*The commenters assert that the building(s) proposed for 830 Pratt Avenue will adversely impact existing view sheds and that the scale and height are inconsistent with the rural character of the neighborhood and would cause an adverse impact to the visual environment.*

As described on page 13 of the IS/MND, the City of St. Helena has not identified any specific vistas or viewsheds subject to protection, but rather, states that the sense of a strong connection to the surrounding agricultural open space and hillsides should be preserved in the future and that views of Vineyards, hillsides, creeks and major landscape features should be maintained. Consistent with the requirements of CEQA Section 15125, projects are to be analyzed against baseline conditions, which is generally interpreted to mean the physical condition existing at the time the environmental document is prepared *and/or* in limited circumstances, the physical condition projected to exist when a project becomes operational. Accordingly, the baseline conditions against which the proposed project was analyzed include a previously developed site in an otherwise agricultural and residential area with two existing dormitories, one to two stories in height, and exhibiting a total of 27,662 square feet and a parking lot with 85 spaces. The subject site is directly proximate to a series of three water treatment ponds (northeast of the site), and the Beringer Winery production facility that includes warehouses, offices, and a tank farm. At present, the site provides for intermittent views of surrounding vineyards and hillsides located to the east and west.

Pursuant to CEQA, a project may cause a significant impact to the visual environment if it would, amongst other things, have a *substantial* adverse effect on a scenic vista or substantially degrade the existing visual character or quality of the site and its surroundings. To discern whether or not the project would cause a substantial adverse impact to a scenic vista or existing visual environment, the applicant prepared a Visual Impact Assessment based on the Bureau of Land Management methodology (**Appendix U of the IS/MND**). The Visual Impact Assessment evaluated modifications to the aesthetic environment for the foreground, mid-ground and background views from eight representative viewpoints and in relation to seven landscape components, namely, landform, vegetation, water, color, adjacent scenery, scarcity, and cultural modifications. It was determined that in most instances, the project would not measurably alter the viewers' perception of the visual environment, or degrade or obstruct existing scenic vistas i.e. the site would continue to read as multi-story dwelling units (dormitories) in an otherwise agricultural and residential area and continue to provide intermittent view of the surrounding agricultural areas and hillsides.

Certain viewpoints along Pratt Avenue, namely, VP1, VP4, and VP6 (as set forth in the Visual Impact Assessment, Appendix U of the IS/MND, would be subject to a greater level of change primarily due to the replacement of surface parking with buildings B and C. Nevertheless, it was concluded, based on the Visual Impact Assessment, that new construction would be of a scale and character consistent with the existing Vineyard Lodge II and that building design and colors will serve to limit changes to the visual environment. Last, mitigation measure AES-1 was introduced to ensure that the final landscape plan will exhibit a level of vegetative screening commensurate with that proposed, which will screen new buildings and therefore sufficiently limit visual changes to a less than significant level. Accordingly, the project is not expected to cause a *substantial* adverse effect on a scenic vista or *substantially* degrade the existing visual character or quality of the sites and its surroundings relative to the existing condition and impacts would be less than significant. No further analysis is therefore warranted.

#### MASTER RESPONSE 2. PUBLIC UTILITIES

*Commenters assert that the Crinella pump station and wastewater Treatment Plant are inadequate to serve the project. In addition, commenters have indicated a concern related to adequacy of potable water supplies and presumed use of groundwater.*

Under CEQA, a project may cause a significant impact if it would, "require or result in the construction of new water or wastewater facilities, the construction of which could cause significant environmental effects." As described on page 56 of the IS/MND under impact 16(B), the Vineyard Lodge project would result in a net increase of wastewater relative to existing conditions. However, the applicant is proposing on-site retention and treatment such that there would be no increase in instantaneous peak flows and therefore the loads placed on the sewer system would be largely consistent with those existing. This theoretical assumption will be confirmed pursuant to condition of approval No.45, which requires the applicant perform a sewer capacity study.

In addition, the applicant is subject to a sewer impact fee assessed with the purpose of funding future upgrades and expansions of the wastewater collection system, treatment plant and/or associated pump stations. The assessment of development impact fees constitutes a uniformly applied development standard which is reflected as a condition of approval. It is presumed that impact fees will be imposed on the project and because the assessment of mandatory impact fees would cover the project's fair share contribution, any impacts subject to said fees would be less than significant and therefore no mitigation is required.

It should be further noted that, under state law, impact fees may only be collected to cover the impact of new development on existing infrastructure. Impact fees cannot be used to correct "existing deficiencies". Funding for maintenance and improvements to the City's wastewater infrastructure to correct existing deficiencies is from Wastewater utility rates (paid by consumers).

#### **Crinella Pump Station**

The Crinella Pump station serves properties located in northeast St. Helena. According to available records, the Crinella Pump station has undergone recent upgrades pursuant to mitigation imposed on the Los Alcobas Hotel project, which included the installation of a new 6" force main (to replace the existing 4" main) and 10" containment pipe that extends a distance of 1,210 linear feet from the Crinella pump station to the existing sewer system at the intersection of Railroad and Fulton Avenues.

To address the net increase in effluent, the CIA project applicant proposes upgrades to the SS primary treatment system which will include new septic and pump tanks. In addition, a new equalization pump tank will be used to collect and store effluent. The equalization pump will utilize onsite storage capacity and equivalent pumps to maintain the same instantaneous peak flow of the existing facility. As a result, there will be *no* increase to the instantaneous peak flow rate to the Crinella Pump Station relative to that which currently exists. No increases in peak flows will occur from implementation of the proposed expansion of the dormitories. Similarly, timed dosing (conveyance) of primary treated effluent during off-peak hours would further reduce loads placed on the pump station and Wastewater Treatment Plant. The retention of the same instantaneous peak flow and timed dosing during off-peak hours will prevent any adverse impacts to the Crinella pump station. When considered individually *and* in conjunction with other approved/ reasonably foreseeable projects, the expansion of the Vineyard Lodge Housing is not expected to place a demand on the Crinella pump station that could not be accommodated by the current system.

#### **Wastewater Treatment Plant**

From the Crinella Pump stations, flows are conveyed to the St. Helena Wastewater Treatment Plant. The Treatment Plant exhibits a dry weather treatment capacity of .5 million gallons per day (MGD) and a wet weather capacity of upwards of 2.8 mgd. On average, the WW Treatment plant treats approximately 400,000 gallons per day. Accordingly, the expected increase in flows generated by the subject project, which equate to 3,232 gpd, would be considered minimal. Further, because the project will provide on-site treatment, the effluent conveyed to the WW Treatment plant is expected to have 45 percent less Biological Oxygen Demand (BOD) relative to typical domestic water. Likewise, on-site treatment will also reduce Total Suspended Solids (TSS) by 80 percent relative to typical domestic water. Given that the net increase in effluent constitutes a relatively negligible amount and that the project applicant proposes primary on-site treatment, the loads placed on the wastewater treatment plant are minimal and not expected to generate an adverse impact.

Commenters allude to the fact that the California Regional Water Quality Control Board has ordered that upgrades be made to the City's Wastewater and Treatment Plant as a basis for the asserting that the sewer systems is inadequate to accommodate the proposed project. As a condition of 2016 NPDES permit reissuance, the City must come into compliance with current effluent limits for BOD and TSS by the year 2021. The NPDES permit authorizes discharge into the Napa River (a non-tidal waterway) given the absence of other feasible alternatives, *with* the stipulation that the City meet more stringent standards for BOD and TSS which are attainable by implementing more advanced secondary treatment. The city has until 2021 to come into compliance with the effluent limits and in the meantime is required to meet "interim" effluent limits.

Given that the amount of effluent generated by the subject project is, in relative terms, a minimal amount and that the project would perform primary on-site treatment to significantly reduce the level of BOD and TSS, the loading capacity placed on the Wastewater Treatment plant can be accommodated and the project would not cause the Wastewater Treatment Plant to exceed any of the effluent limits imposed on the facility now or in the current permit term. Further, the applicant will be assessed a sewer impact fee between 71 cents/ sq.ft. (Multi-Family Residential) to 94 cents/Square foot (lodging), equating to a total assessment value between \$18,172.45 and 24,059.30. The sewer (wastewater) impact fee accounts for the costs associated with maintenance and improvement to the Wastewater Treatment Plant and Sewer Collection System in order to support new development. With sewer system upgrades proposed

by the project and the assessment of impact fees, the project is not expected to exceed or otherwise negatively impact the existing sewer system and infrastructure.

To conclude, given that the project would not increase the instantaneous wastewater peak flows of the site nor exceed the available capacity or effluent limits of the St. Helena Wastewater Treatment Plant and that the applicant would also pay the sewer impact fee which is commensurate with their fair share contribution, impacts related to wastewater would be less than significant. While no further analysis is warranted, the IS/MND will be updated to clarify and expand on the analysis to more accurately represent the project's relationship with the Wastewater Treatment system. In addition, an incorrect reference to the peak daily wastewater flows and anticipated increase will be corrected. The following changes to the language included on page 57 of the IS/MND, 16(a) will be made, as shown below:

**A. (Exceed Wastewater Treatment Requirements) Less Than Significant Impact:** The project is not expected to exceed wastewater treatment requirements set forth by the Regional Water Quality Control Board. To accommodate wastewater flows generated at the Greystone Campus, the existing onsite primary treatment would be used, including one 3,000 gallon grease interceptor, two 7,500 gallon settling tanks and one 6,000 gallon settling tank, and a pump sump and pump to convey the SS flows to the Markham Combined Wastewater System (MCWS) located at Markham Winery on SR 29, north of St. Helena. Improvements to the existing dishwashing and other kitchen facilities, including replacement with more water and energy efficient equipment, in addition to the closure of the WSGR would reduce the overall water and wastewater demand for the site. Taken together, the proposed improvements will lead to a net decrease in flows conveyed and treated at the MCWS and will be within the authorized discharge amount of 14,850 gpd.

At the Vineyard Lodge Housing site, wastewater will be generated by dormitory restrooms, showers, and common areas. The project will utilize the existing sanitary sewer (SS). Effluent would undergo primary treatment in septic tanks and then be conveyed to the municipal sewer system through the existing 3" SS. The SS management system will be resized to accommodate a peak daily wastewater flow of approximately ~~9,520~~ 9,605 gallons per day (gpd) which equates to a projected net increase of ~~1,960~~ 3,232 gpd over the existing ~~capacity~~ average recorded flow of 6,373. Effluent will undergo primary treatment in septic tanks, which will produce effluent that is of higher quality than residential wastewater. A new equalization pump tank will be used to collect and store effluent. The equalization tank will provide approximately 12.5 hours of retention time at the anticipated peak daily flowrate of 9,520 gpd, and is sufficiently sized to allow for only off-peak discharge to the City's sewer system. The equalization pump will utilize on site storage capacity and equivalent pumps to maintain the same instantaneous peak flow discharge as the existing facility. As a result, there will be no increase to the instantaneous flow rate to the City sewer system and therefore no adverse effect on the sewer system capacity. No increases in peak flows are proposed to the City sewer system, and the timed dosing of primary treated effluent during off-peak hours would prevent any adverse impacts to the City sewers.

The wastewater flows will be conveyed to the City of St. Helena Wastewater Treatment Plant, which has sufficient operating capacity to handle the additional flows generated at the Vineyard Lodge Housing site. Further, the project will be assessed the sewer impact fee which will help to maintain the existing system and contribute to the additional costs that will be incurred with the future expansion and upgrade of the wastewater treatment plant. Therefore, the project would not exceed wastewater treatment requirements and impacts would be less than significant.



**b.(New Wastewater treatment Facilities)** Less Than Significant Impact: There would be no new construction or expansion of domestic water or wastewater facilities as part of the proposed project. For the Greystone Campus, as stated above, wastewater flows are expected to decrease following project implementation. For the Vineyard Lodge Housing site, as stated above, the project would result in a net increase of ~~1,960~~ 3,232 gpd of wastewater over existing flows. However, the City of St. Helena Wastewater Treatment Plant has sufficient operating capacity to handle the additional flows generated at the Vineyard Lodge Housing site. Further, a sewer impact mitigation fee will be assessed with the purpose of ~~maintaining~~ improving the existing system and to contribute to offset costs of future expansion and upgrade of the wastewater treatment plant. The sewer impact fee will be assessed against the dormitory project at the time of issuance of building permits, therefore, impacts would be less than significant

#### Ground Water

*As stated above, several commenters purport that the proposed project will use groundwater and express concerns that there is not a sufficient level of groundwater in the aquifer to serve the subject project.*

As detailed on page 65 of the IS/MND, the CIA maintains two separate water agreements applicable to the Greystone Campus and Vineyard Lodge Housing Site. The current water allotments authorized by the Agreements allocate an average of 15,900 gpd to Greystone and 4,750 gpd to the Vineyard Lodge Site. The total allotment across the two sites amounts to an average of 20,650 gpd or 23.1 acre feet (AF) per year. As part of the CIA Master Plan project, the applicant is requesting to rescind the two separate agreements and adopt a new joint water agreement which would redistribute the gross water allotment across the two sites while maintaining the current total allotment of 23.1 AF per year.

The Greystone site has one existing well which may be used for landscape irrigation or domestic water use and will continue to be used as such under a new joint water use agreement. There is no new landscaping proposed for the Greystone site and no expectation that the project would result in a substantial increase to the amount of groundwater extracted from the onsite well. There are no groundwater wells at the Vineyard Lodge Housing Site and none are proposed. Rather, water supplies at the Vineyard Lodge Housing Site are provided by the City's municipal water supply, of which approximately 49% percent is sourced from Bell Canyon reservoir, 31% is provided by the City of Napa and approximately 20 % from Stonebridge Wells.

As specified in the IS/MND, the project will not result in a net increase to water use and will, like all water customers, be subject to water use restrictions imposed during dry years. Additionally, under the Water Agreements, the applicant will continue to be required to monitor and report City water use on a regular basis and be subject to penalties in the event that authorized water amounts are exceeded. Given the above, there is no expectation that the proposed project would exceed available water supplies or necessitate new or expanded water entitlements. Accordingly, no further analysis is warranted.

#### MASTER RESPONSE 3. TRAFFIC

*Commenters assert that the project would cause traffic impacts which may be cumulatively significant and that sufficiency of parking on the Vineyard Lodge Housing Site at 830 Pratt Avenue is inadequate.*

*Traffic impacts/ LOS delays*

The traffic analysis prepared by traffic consultant, Crane Transportation, was conducted in accordance with CEQA and appropriately determined that the project would not generate significant traffic impacts, cumulative or otherwise, and as detailed below.

The project's traffic impacts were evaluated consistent with the requirements of CEQA in Section 15, 'Transportation/Traffic,' of the IS/MND. The Traffic consultant, Crane Transportation, performed traffic counts on Thursday, May 12, 2016 for the period from 6:00 AM to 6:00 PM to establish the existing condition exhibited by the study intersections. Volumes were then seasonally adjusted consistent with Caltrans' PeMS (Performance Measurement System) peak season data for S.R. 29-128 to represent peak season conditions.

Traffic and intersection operations were evaluated using level of service calculations. Level of Service (LOS) provides for a qualitative description of operations that range from "LOS A," whereby the roadway exhibits excess capacity and little or no delay is present, to "LOS F," whereby the volume of traffic exceeds the capacity and generates long queues and excessive delays. Typically, "LOS E" represents "at capacity" conditions and "LOS F" represents "over capacity" conditions.

For side street stop-controlled intersections, such as that exhibited by the Pratt Avenue/ SR 29 intersection, operations are defined by the level of service and average control delay per vehicle (measured in seconds), with delay reported for the stop sign controlled approaches or turn movements. In an effort to evaluate the project's reasonably foreseeable impacts, traffic impacts were evaluated under existing, baseline (2018), and future (2035) scenarios.

As detailed in the Traffic Analysis, the significance criterion established by the 1993 St. Helena General Plan and applicable to the subject project reads, *"All unsignalized intersections must maintain LOS C. If the LOS degrades below LOS C, an evaluation of the need for traffic signalization shall be undertaken according to standard Caltrans signal warrants as described below. If signals are not initially warranted, the location shall continue to be monitored for signal warrants on a regular basis."*

Under existing conditions without the project, the Pratt Ave/ SR HWY 29 WB intersection exhibits an LOS "D" under the AM Peak hour and LOS "E" under the PM Peak Hour and therefore the level of service is *already* below that considered acceptable by the General Plan, which is LOS C. Under baseline and future scenarios, the intersection further degrades to LOS "F" under conditions *without* the project.

In accordance with the significance criteria applicable to the project, a warrant threshold analysis was undertaken to determine the need for signalization. There are 9 possible tests for determining whether a traffic signal should be considered for installation. As detailed on page 9 of the traffic Study (**Appendix Q**) These tests, called "warrants", consider criteria such as actual traffic volume, pedestrian volume, presence of school children, and accident history. The intersection volume data together with the available collision histories were compared to warrants contained in the Manual on Uniform Traffic Control Devices (MUTCD), Federal Highway Administration, 2014, California Supplement.

As stated in the Traffic Impact Report and on page 52 of the IS/MND, signal warrant thresholds were *not* met and therefore signalization is not needed and the project is not required to install signalization or otherwise mitigate for an impact. Accordingly, the Vineyard Lodge's contribution to traffic delay is determined not to be so substantial as to conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system and does not constitute a potentially significant impact necessitating mitigation.

The commenters' concerns related to the delay on Pratt Ave/SR Hwy 29 WB Intersection. While the traffic study does confirm the assertion that the Pratt Avenue/ SR Hwy 29 intersection exhibits a deteriorated LOS under all scenarios (existing, baseline, and future), the substantial delay is an existing condition and continues to occur under future scenarios both with *and without* the project. The project's contribution to the existing delay is not great enough to trigger the need for signalization. The need for signalization at the Pratt Avenue/SR 29 intersection will continue to be monitored as subsequent project's trigger the need for a traffic study/warrant analysis and as needed to inform the Napa Valley Transportation Authority (NVTA) circulation plan updates and Caltrans studies. Further, the project will be assessed a traffic impact fee which will help pay for circulation improvements to reduce the impacts of traffic generated by new development within the City. Finally, all subsequent projects subject to CEQA will be required to evaluate their respective traffic impacts and contributions to roadway delays and mitigate accordingly. Given the above, the IS/MND's conclusion that the project will have a less than significant impact and the determination that the project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system remain valid.

#### *Cumulative Traffic Impacts.*

To determine whether impacts may be "cumulatively considerable" the City directed the traffic consultant to evaluate traffic under the existing, baseline, and future year scenarios. The baseline scenario accounts for traffic generated by "pipeline projects" or those which are approved and/or reasonably expected to be constructed in the next 2-3 years; the traffic study accounted for traffic generated by the Los Alcobas project; however, no other approved major projects were anticipated at the time the traffic study was prepared in November 2016. For the future year scenario, the traffic impacts included pipeline projects (Los Alcobas) *and* applied a 2.25 percent growth rate to reflect buildout of the General Plan in 2035.

Under CEQA, a traffic impact could occur if the project would (amongst other things) "Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system..." As stated above, the City's significance criterion applicable to the project is outlined in the General Plan, and reads: "*All unsignalized intersections must maintain LOS C. If the LOS degrades below LOS C, an evaluation of the need for traffic signalization shall be undertaken according to standard Caltrans signal warrants as described below. If signals are not initially warranted, the location shall continue to be monitored for signal warrants on a regular basis.*"

As detailed in the traffic study and MND, when the project's traffic impacts are combined with the anticipated traffic impacts of other past, present, and probable future projects in the area, they do not cumulatively increase traffic levels above the City's significance threshold ( i.e. warrant thresholds were not met under any of the scenarios). If this potential were to exist, the environmental document would be required to mitigate cumulative impacts. However, because, taken together, the existing, baseline, and future scenarios do not cumulatively exceed the significance thresholds, the projects traffic contributions are not "cumulatively considerable" meaning that the project does not have a potential to result in cumulative impacts and no further consideration of cumulative impacts is warranted.

#### Parking

*Commenters assert that the level of parking proposed for the Vineyard Lodge Housing expansion is not sufficient and that residents of the Vineyard Lodge will park along Pratt Avenue.*

A deficiency in parking does not in and of itself trigger a mandatory finding of significance nor is it necessarily considered a potential significant environmental impact; if however, the parking deficiency would contribute to or otherwise generate traffic congestion, safety hazards, etc., it may be a significant environmental impact. Because the Project and the proposed Vineyard Lodge Housing site has been planned and proposed to accommodate the transportation needs of its students through the provision of designated spaces and in conjunction with other means enumerated below, there will be no direct or indirect parking related impacts that would cause a potentially significant impact on the physical environment and no further analysis is warranted.

As stated on page 17 of the Traffic Impact Report (**Appendix Q**), the Traffic Consultant, Crane Transportation, performed hourly on-site parking surveys on Thursday May 12, 2016, which was considered to be a “typical day” at the CIA Greystone campus and Vineyard Lodge Housing Site. As detailed in the Traffic Impact Report (TIR) (which is incorporated into the IS/MND), at maximum, 42 vehicles were parked in the 85 space parking lot at the Vineyard Lodge Housing site. East of the main building, in the service parking area, there was one to three service vehicles parked throughout the day. At all times there were 43 or more available parking spaces in the parking lot. It was noted that permits were not readily displayed and therefore, the site did not appear to be monitored for permit holders versus visitors. Based on information obtained from the applicant, it is understood that 31 parking permits have been issued to students and therefore, it is assumed that vehicles in excess of that belong to visitors. The purpose of the parking analysis was to determine the appropriate number of parking spaces to provide a sufficient level of off- street parking for residents; as such, the TIR did not account for vehicles parked off-site and/or along Pratt Avenue.

As stated above, for the existing 101 rooms at the Vineyard Lodge Housing Site, only 31 parking permits have been issued. As such, it is reasonably concluded that the parking counts from May 2016 reflect the 31 permitted vehicles and approximately 10 visitor vehicles. With both resident and visitor vehicles, there remained an excess capacity of 43 parking spaces.

There is no reason to believe that the student to vehicle ratio would substantially change under the proposed project, namely because (1) the CIA retains authority to issue or not issue parking permits, (2) the project will be subject to a condition of approval stipulating that it may not issue more than 69 parking permits, and (3) the site is uniquely operated in that it provides frequent reliable transportation to and from the Greystone Campus and to other locations, as needed, will provide three on-demand rental cars, and per mitigation measure LU-1, will be required to introduce a scalable bike share program that may be expanded as demand necessitates. Mitigation Measure LU-1 specifies:

*“ To minimize reliance on vehicles, the applicant shall provide a minimum of five (5) on-demand bicycles to be available to residents on an as-needed basis. If there is an increase in student demand for bicycles beyond the number provided, the applicant is required to increase the number of bicycles available for dormitory residents to meet the demand. Bikes shall be maintained in good functioning condition and be readily accessible to residents. The applicant shall provide a written statement detailing how the on-demand bike service will function for review and approval by the Planning and Community improvement Director prior to building permit issuance. The bikes shall be made available for use upon certificate of occupancy for whichever building is constructed first.”*

By providing parking permits and spaces at a level consistent with the “typical” demand and complying with Mitigation Measures LU-1 which requires an on-demand bike program, the demand for parking is not expected to exceed that provided by the project. As such, the provision of 69 designated parking spaces consistent with the ratio currently exhibited by the

subject site, is reasonable and is not expected to cause an adverse physical impact on the environment.

Finally, in regards to on-street parking — parking is allowed along Pratt Avenue insofar as there is adequate shoulder widths (8 feet) and where adequate shoulder widths do not exist, parking is prohibited and denoted by red striping. Vehicles parked in appropriate locations along Pratt Avenue do not pose a safety hazard or otherwise generate a significant impact on the environment and therefore, no further consideration of this matter is warranted.

#### MASTER RESPONSE 4. SAFETY

*Commenters note the poor condition of the Pratt Avenue Roadway and indicate that its current condition is not sufficient to maintain safety and that the CIA should do more to remediate the unsafe road conditions.*

As stated on page 49 of the IS/MND, Pratt Avenue serves as a two-lane collector that connects Main Street to Silverado Trail on the north side of the City and provides access to both residential and winery uses. The condition of the Pratt Avenue roadway is an existing condition and would continue to deteriorate with *or without* the project. The project's contribution to roadway deterioration of Pratt Avenue is expected to be average and not exceptional relative to the contributions of other users.

The proposed project would result in an increase in the number of students residing at the Vineyard Lodge housing site and attending weekday classes at the Greystone facility. Regular shuttle service would continue to provide transportation between the Vineyard Lodge Housing site and the Greystone campus on weekdays, as students would not be allowed to use a personal vehicle to attend classes at Greystone as stated by the applicant and consistent with the current practice of students enrolled at the CIA. This prohibition will be detailed in the Transportation Management Plan required pursuant to Condition of Approval No. \_\_\_. Alternatively, some students may choose to walk or bike to classes. However, shuttle buses would continue to be provided from 5:30 am to 9:00 pm with no change in frequency of shuttle trips given the proposed increase in shuttle size. Three on-demand rental cars will be provided for non-school related trips. It is recognized that the increase in traffic trips generated by the project would contribute towards typical wear and tear of the roadway.

The CEQA Guidelines and recent case law, namely, *Dolan v. City of Tigard*, 512 U.S. 374 (1994), acknowledge that mitigation measures imposed on a project must have an "essential nexus" to a legitimate government interest and must bear a "rough proportionality" to a project's impacts; in other words, the mitigation must be related both in nature and extent to the impact of the proposed project.

The portion of Pratt Avenue that extends from the dormitories to the intersection with Main Street includes the section of roadway which would be most frequently used by the residents of the Vineyard Lodge Dormitory. To ensure that the applicant contribute their fair share towards the maintenance of the most readily affected portion of Pratt Avenue, mitigation measure Trans-2 would be imposed on the project and stipulates that, *"The applicant shall either (1) micro surface the full width of Pratt Avenue along the Project frontage extending to the intersection of SR29 (Main Street), introduce by thermoplastic a Class II bike lane along westbound Pratt Avenue (northern side) extending from the project site to the intersection of SR 29 (Main Street) and Pratt Avenue and restripe for a fog line along eastbound Pratt (southern side) extending from the project site to the intersection of SR 29 (Main Street) and Pratt Avenue in accordance with St. Helena Bicycle Plan, 2012, Appendix B – Design Standards for Class I, II, and III Bikeways OR*

*(2) pay an in lieu fee of \$130,000 to provide funding for the City of St. Helena to perform the requisite improvements.”*

There is no nexus to require the applicant to contribute towards repaving *all* of Pratt Avenue because the Project, as proposed, will not generate a substantial increase in trips along the entirety of Pratt Avenue and given that the deteriorated condition of Pratt is an existing condition. As such, repaving all of Pratt Avenue would be disproportionate to the impacts of the project. By Law impact fees can only be collected to cover the impact of new development on existing infrastructure. In other words, Impact fees cannot be used to correct “existing deficiencies”. Accordingly, the mitigation measure Trans-2, set forth in the MND is sufficient to offset project specific impacts and no changes are warranted.

To further clarify, normal street maintenance is performed by the City of St. Helena and may include upgrades to maintain pavement, striping, curb and gutter, street lighting, access ramps, sidewalks and storm drain infrastructure, etc. The City utilizes a computer-based program that helps prioritize roadway maintenance and construction projects based on current Pavement Condition Index and available funding. The program prioritizes roadway maintenance based on level of deterioration and public use. The list of projects are then vetted by City staff and presented to City Council for approval each year. Funding to undertake street maintenance is comprised of General Fund, gas tax, grants, sales tax, and Measure T funding (available 2018). Street maintenance projects programmed in the pavement management plan for Fiscal Year 2016/2017 and 2017/2018 do not currently include Pratt Avenue. However, Staff will develop a new two year pavement management plan in conjunction with the Fiscal Year 2017/2018 budget. This pavement management plan will include more funding than the recent past due to new funding anticipated from Measure T in 2019. Measure T is expected to provide over \$600,000 per year to the City of St Helena to be used towards maintenance of streets and sidewalks.

#### MASTER RESPONSE 5. PROJECT ALTERNATIVES

*Commenters ask that alternative sites, including the Greystone Campus, be considered to accommodate housing.*

Mitigated Negative Declarations do not require the consideration of alternatives and as such, the scope of the CEQA review was limited to the proposed project. Where an Initial Study establishes that a project will not create substantial or potentially substantial adverse changes to the physical conditions within the area of the project, a negative declaration or mitigated negative declaration is appropriate. Here, the required mitigation measures ensure that the Project will not create significant environmental impacts and as such, the environmental document includes those elements required of an MND: A brief description of the project, location, and proponent's name (CCR §15071[a,b]), proposed finding that the project will have no significant effect (CCR §15071[c]), initial study documenting reasons supporting the finding (CCR §15071[d]), and mitigation measures to avoid potentially significant effects (CCR §15071[e]). Negative declarations and mitigated negative declarations do not require analysis of project alternatives because the project as proposed will not have a significant environmental impact. Thus, no alternative sites were required to be analyzed as a part of the Project's environmental review.

#### MASTER RESPONSE 6. PREPARATION OF AN EIR

*Commenters assert that that the project may result in potentially significant impacts, requiring the City of St. Helena to prepare an EIR to comply with CEQA.*

Based on the whole record before the City of St. Helena including the Initial Study, all potentially significant impacts can be mitigated to less than significant levels. Therefore, an MND is the appropriate level of environmental review.

The commenters do not detail *how* the project will result in significant impacts nor detail how or why mitigation measures are insufficient. Likewise, there is no specificity as to what significant impacts the project would generate. None of the comment letters received and included herein present a fair argument based on substantial evidence that the Project may have a significant impact on the environment.

“Substantial evidence” includes facts, fact-related reasonable assumptions, and expert opinions based on facts. It does not include arguments, speculation, unsubstantiated opinion or narrative, clearly inaccurate or erroneous evidence, or socioeconomic impacts not related to the physical environment. (Pub. Res. Code §§21080(e), 21082.2(c); Guidelines § 15384). CEQA § 15204(c) advises reviewers that comments should be accompanied by factual support: Reviewers should explain the basis for their comments, and should submit data or references offering facts, reasonable assumptions based on facts, or expert opinion supported by facts in support of the comments. Pursuant to § 15064, an effect shall not be considered significant in the absence of substantial evidence. At the drafting of this Response to Comments no such factual support has been provided that raises a fair argument that the Project, as proposed, may have a significant impact on the environment.

The City of St. Helena as the Lead Agency, has duly considered all comments received in response to the Initial Study and Mitigated Negative Declaration (IS/MND). The City of St. Helena finds that the IS/MND document itself, and the Lead Agency’s responses to comments, are adequate in evaluating potential impacts of the subject project. The City of St. Helena finds that none of the comments on the IS/MND are supported by “substantial evidence” in light of the whole record to create a fair argument as to the significance of any particular impact, either individually or cumulatively, as all significant impacts are either avoided or reduced to less-than-significant levels.

Impacts will be reduced to less-than-significant levels through the following: implementation of the mitigation measures described in the IS/MND and this Response to Comments document; Conditions of Approval, which will be required by the City of St. Helena during the permit process; and compliance with City of St. Helena Ordinances and uniformly applied development standards.

The City of St. Helena has determined that the project does not meet any of the conditions under CEQA Section 15073.5, as described in Section 4.0 Summary below. Therefore, recirculation of a revised IS/MND or the preparation of an EIR is not required. Consistent with the CEQA Guidelines, this response to comments document clarifies the information and analyses in the IS/MND. As such, the IS/MND along with the response to comments achieves the intent of CEQA by disclosing all potential impacts of the project and identifying feasible mitigation measures that reduce impacts to levels below significant..

## INDIVIDUAL COMMENT LETTERS 1-12

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Commenter: Tom Thurmond  
 Status: Individual  
 Date Received: December 23, 2016

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### **Comment 1-1**



*“Pratt Avenue already has become very dangerous to drivers, bicyclists, and pedestrians. The road surface is in poor condition, which increases the likelihood of accidents leading to death or injury. Resurfacing the small portion from the CIA dorms to Main St. will not resolve that problem. The City needs to require a larger contribution from the CIA toward repaving ALL of Pratt Avenue...”*

**Response 1-1**

See Master Response 4.

**Comment 1-2**

*“There is a major problem with speeding along Pratt. Cars and trucks hurtle along day and night at speeds well over the limit, endangering other drivers, walkers, and bikers. The CIA expansion is bound to exacerbate this problem...”*

**Response 1-2**

The speeds on City arterials are regulated by state and local law which is enforced by the St. Helena Police Department. As detailed on page 46 of the IS/MND, The Vineyard Lodge Housing Site is located near the urban limit line and proximate to the police and fire stations and is well served by public services. Pratt Avenue is patrolled at a level consistent with any other secondary artery (St. Helena Police Department, 2016).. Speed limits are enforced on Pratt Avenue on a random basis (like the rest of the City) to prevent frequent drivers from establishing time periods considered “safe to speed”. The Police Department has further indicated that they increase patrols at the request of residents, which typically equates to a few times per year.

The St. Helena Police Department did not issue any speeding citations in 2015 and 7 citations were issued in 2016 — it is unknown whether these citations were issued to residents of Vineyard Lodge. The number of citations issued is not exceptional relative to other areas of the City. For example, in 2016, 10 citations were issued on Pope Street and 6 on Sulphur Springs. As detailed on page 11 of the Vineyard Lodge Traffic Impact Report (**IS/MND Appendix Q**), Accident data provided by the City of St. Helena from SWITRS (Statewide Integrated Traffic Reporting System) for the Pratt Avenue/Main Street intersection revealed that over the past five years, there have not been five or more reported crashes at this intersection within any 12-month period. At most, there were 4 crashes between 10/21/11 and 10/24/12. There were three reported crashes in 2011, one in 2012, two in 2013 and 2014, and one in 2015.

Residents of the Vineyard Lodge Housing site would continue to be subject to state and local laws regulating speeds along Pratt Avenue and elsewhere in the City. Further, that street will continue to be monitored by the St. Helena Police Department and all local and state laws will be enforced. There is no evidence indicating that the proposed project would cause unsafe driving conditions or exacerbate the problem of speeding along Pratt Avenue and no further analysis is warranted.

If speeding on Pratt is of particular concern to the neighbors it may benefit from further consideration. However, this is not a project specific impact and therefore will not be addressed further here.

**Comment 1-3**

*“It is now often nearly impossible to make a left turn from Pratt onto Main due to the heavy traffic on Main. The CIA expansion will further add to this problem. When you include the new Las Alcobas*

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*hotel on the west side of the intersection and the potential increase in traffic associated with Beringer's planned changes at their Pratt Avenue winery, it makes the situation even more dire. I realize that the Pratt/Main intersection is under State control. Nevertheless, the City should proactively be taking measures to mitigate the problem. With the current fiscal problems facing the City, it is incumbent on staff to require the maximum contribution from the CIA to help alleviate the problems they are making worse."*

**Response 1-3**

Please refer to Master Response 3 for a discussion of traffic impacts and discussion of cumulative traffic impacts. Traffic impacts are discussed in the IS/MND on pages 48 to 55.

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Commenter: Tom Belt

Status: Individual

Date Received: Dec 23, 2016

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**Comment 2-1**

*"The big bucks behind the CIA needs to pay for the increase in size of the waste water line that will be needed to handle the CIA's new dormitories and increased burden of affluent. The current waste water line is already at capacity that services the Crinella housing tract. Adding another 9,520 gallons a day will over burden the line. It's about time our city management makes these big developers pay for the costs of necessary up grades to our utility infrastructures rather than keep passing them on to the current water and waste water customers. All we hear about lately is how inadequate our waste water facility is and how poorly our city's reputation is with the State Water Board. And now the CIA wants to add to this problem. They need to pay!"*

**Response 2-1**

Please refer to Master Response 2.

**Comment 2-2**

*"Also, the article in the Star leads the reader to believe the CIA wants to reallocate its current water use by changing its agreements with the city. If I read the article correctly, it looks like the CIA wants to use more ground water to make up for the demand at the dormitories. Does anyone meter the ground water currently being taken by the CIA? St. Helena has a moratorium on drilling new wells in the residential area of St. Helena, yet the city is okay with allowing the CIA to pump even more water from the ground. Come on St. Helena City Management, get your act together and make these businesses pay for the adverse impacts these developers and developments place on the residents who live here!"*

**Response 2-2**

Please refer to Master Response 2.

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Commenter: Celia Lenson

Status: Individual, property owner at 925 Pratt Ave

Date Received: December 26, 2016

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**Comment 3-1**

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*“ CIA Landscaping: Since the structure will double in size, I hope the City will consider that the dorms have beautiful landscaping to mitigate the size of the building. Such as Trees and California Native plants”*

**Response 3-1**

The applicant is proposing a generous amount of landscaping as detailed on project plans, (IS/MND **Appendix K**). As evidenced by the Visual Impact Assessment (**Appendix U**) retention of the existing camphor trees located along the property frontage and the introduction of the landscaping depicted in the landscape plan, will provide a level of screening so as to reduce and soften the visual impact of the proposed buildings. To ensure that the landscape plan is properly implemented and that the type and amount of vegetation is commensurate with that approved, the project is subject to mitigation measure AES-1, which states that, “The final Landscape Plan and proposed vegetative screening shall be subject to review and approval by the Planning and Community Improvement Director prior to issuance of building permit so as to confirm consistency with approved plans.”. Accordingly, the analysis and associated mitigation adequately address the aesthetic concerns of the project.

**Comment 3-2**

*“2. CIA Parking: The City has not enforced parking restrictions on CIA. Sometimes, all of Pratt Street looks like a sea of cars. This is a displeased to the Community. No one likes looking at a parking lot considering the cost of the homes on Pratt Street.”*

**Response 3-2**

See Master Response 3.

**Comment 3-3**

*“3. Bike Lanes: The bikes lanes are a great idea. I hope the City restricts Pratt parking to the residents on Pratt Street because CIA abuses the parking on Pratt. Many residents have complained... If all the issues are addressed, I welcome the dorms.”*

**Response 3-3**

Please see Master Response 3.

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Commenter: George Caloyannidis-

Status: Individual

Date Received: Dec 27, 2016

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**Comment 4-1**

*“ Is there a definition to the application as to who qualifies as a student. I have to assume that whatever that definition is, any other tenants such as staff, instructors etc would be excluded and that there is associated language to that effect.”*

**Response 4-1**

The project will be conditioned such that only students, meaning those who are actively enrolled in either the certificate or associate degree programs (1 and 2 years, respectively) may reside on the Greystone Campus or at the Vineyard Lodge Housing Site. This would preclude other tenant types. To avoid ambiguity, the condition will be written to specify exactly who qualifies as a student.

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Commenter: Donna Hinds

Status: Individual

Date Received: January 11, 2017 and January 17, 2017

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**Comment 5-1**

The traffic study is inadequate

**Response 5-1**

See Master Response 3.

**Comment 5-2**

The noise study is inadequate; baseline noise measurements were not representative of typical conditions.

**Response 5-2**

As detailed under Section 11 and on page 42 of the IS/MND, to characterize noise levels at the Vineyard Lodge Housing Site, a Noise Study was prepared by consultants, ICF International, on June 15, 2016. Noise monitoring was conducted on the Vineyard Lodge project site to characterize existing noise levels in the project area. The Napa Wine Train was not operating during this time and the existing housing facilities were not occupied because students were on break. The measured noise levels therefore represent the lowest noise levels likely to be encountered in the area. As such, the baseline noise levels against which the project's noise contributions were analyzed served as the *most conservative* method of evaluating noise impacts of the project. The analysis was adequate and no changes are needed.

**Comment 5-3**

A parking variance should not be issued

**Response 5-3**

See Master Response 3.

**Comment 5-4**

There will be adverse visual impacts

**Response 5-4**

See Master Response 1.

**Comment 5-5**

The increased population would generate adverse impacts.

**Response 5-5**

The analysis in the IS/MND accounts for the increase in population across all impact categories, but in particular, under Section 12. Population and Housing, IS/MND pages 45-46. As stated in the IS/MND under section 12. A project will normally have a significant environmental effect if it will displace a large number of people or induce substantial growth or concentration of population. The CIA Campus Master Plan involves an expansion in student enrollment from 200 to 300 students for a net increase of 100 new students plus the addition of seven new instructional staff. Concurrently, 49 employees would relocate to the recently acquired American Center for Wine, Food & the Arts (Copia) in the City of Napa, California. The net change in student and faculty at the Greystone Campus would amount to a net increase of 58 students and staff. The Vineyard Lodge Housing would be expanded by a net total of 123 student residents. Given that the project will result in a net decrease in faculty, while providing housing for the majority of students, the project is not expected to significantly impact the existing or future housing supply in St. Helena. Similarly, given the fact that the CIA will provide dormitories sufficient to house all new students, the project would not displace existing housing or people and any impacts associated with the increase in population would be less than significant. No further analysis is therefore required.

**Comment 5-6**

There would be adverse impacts to sewer and water

**Response 5-6**

See Master Response 2.

**Comment 5-7**

There was no evaluation of alternatives which would generate fewer impacts

**Response 5-7**

Please see Master Response 5.

**Comment 5-8**

The requested setback variance contradicts the General plan policies

**Response 5-8**

The General Plan Guidelines published by the State Office of Planning and Research interpret "consistency" as follows: "An action, program, or project is consistent with the General Plan if, considering all its aspects; it will further the objectives and policies of the General Plan and not obstruct their attainment." As such, the standard for analysis used in the Initial Study IS/MND is predicated on *general* agreement with the policy language and furtherance of the policy intent (as determined by a review of the policy context).

Variances provide a limited waiver from the explicit requirements of the zoning code insofar as exceptional circumstances exist and very specific findings can be made. Variance may be granted in order to provide property owners equality of treatment from their neighbors. As detailed in Municipal Code Section 17.172.010 the purpose of a Variance is to allow variation from the strict application of the terms of this title where, by reason of the exceptional narrowness or unusual shape of a specific piece of property, or by reason of exceptional size, shape, topographic conditions or other extraordinary situation or condition of such piece of property; or because of the use or development of lands immediately adjoining such property, the literal enforcement of the

requirements of this title would involve practical difficulties or would cause undue hardship. (Prior code § 27.445).

The commenter cited General Plan policy 5.3.3 in support of their assertion that the project is inconsistent with the General Plan. That policy is as follows:

5.3.3 Preserve right of way for future collector streets within the Planning Area of the City as follows:

- Starr Avenue from Pratt Avenue to Adams Street and from the Urban Limit Line to Dowdell Lane
- Mills Lane from SR 29 to Starr Avenue, including potential realignment with Grayson Avenue at SR 2
- Oak Avenue from Vidovich Avenue to Grayson Avenue

*The City recognizes that development may or may not proceed along the lines envisioned in this plan, and that some areas not currently identified for potential development may in fact precede those that are so designated. The intent of the right-of-way preservation designation is to clearly define the interest of the City in maintaining the option for extending its collector street system into these areas. Special setback areas shall be established along collector streets to allow for future widening.*

Review of the above policy indicates that it does not apply to Pratt Avenue, but rather applies to specific portions of (1) Starr Avenue, (2) Mills Lane, and (3) Oak Avenue. As such, there is no indication that the requested variance would be in direct or indirect conflict with any goal, policy or objective of the St. Helena General Plan and that the variance may still be found to be generally consistent with the overall intent of the General Plan and policies therein. No further analysis is needed.

Last, it should be noted the determination that the proposed project or a component thereof, is consistent or inconsistent with the General Plan 2025 policies is ultimately the decision of the City of the lead agency.

#### **Comment 5-9**

The applicant does not have access rights to vineyard road.

#### **Response 5-9**

The applicant has provided a signed access agreement detailing access rights across Vineyard Road which has been reviewed and approved by the Public Works Department. No further consideration is warranted.

#### **Comment 5-10**

The project requires an Environmental Impact report given the significant size and potential impacts of the project.

#### **Response 5-10**

See Master Response 6.

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Commenter: D & S Packman  
 Status: Individual  
 Date Received: January 9, 2017

**Comment 6-1**

*"We've lived a year with constant worker traffic and construction noise from building Los Alcobas Resort; plus, all the cars constantly shutting CIA people and parked outside this house more than just a few times a year - we counted over 40 instances."*

**Response 6-1**

Comment noted.

**Comment 6-2**

*"We had to call police because we had one girl from CIA DORMS enter our home at night and sleep partially on our couch - use our upstairs bathroom (a strange sleepwalking matter) which was horrifying."*

**Response 6-2**

The incident described above is understood to be an isolated event and not an occurrence reasonably expected to result from the proposed project. Discussion with the Police Department indicated that for the year 2016 police received a total of six (6) calls associated with Vineyard Lodge Housing. It is reasonable to assume that there may continue to be occasional incidents such as those listed below, but there is no reason to believe that they would be so significant or recurrent as to constitute a physical impact to the environment. No further consideration is warranted.

Incidents Related to Vineyard Lodge for the year 2016:

|          |                                                                                                                   |
|----------|-------------------------------------------------------------------------------------------------------------------|
| 05/07/16 | Fire Alarm Sounding, False Alarm                                                                                  |
| 06/02/16 | Vehicle burglary reported by student, report taken                                                                |
| 07/15/16 | Alarm heard in the area, security already on site, all ok                                                         |
| 10/05/16 | Fire alarm sounding, False alarm                                                                                  |
| 10/16/16 | Late report of Domestic Violence from Santa Clara PD, occurred 10/4/16 at the Dorms, report taken & charges filed |
| 12/19/16 | Agency assist at the Dorms, no details listed                                                                     |

**Comment 6-3**

*"Plus there is water running down our street constantly- I would say 70% of time we've been here, including recently before rain--such that we put the trash cans out almost every week in middle of large pool of running water, soaking our shoes each time."*

**Response 6-3**

Comment noted. This is not a project related issue and therefore will not be addressed here.

**Comment 6-4**



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*"Not complaining - just stating that enough is enough and if you add this massive project and residential facility to Pratt Ave - it's too much for the wonderful people who are paying a huge amount of money to live here expecting peace and serenity."*

**Response 6-5**

Comment noted.

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Commenter: Tom Rinaldi

Status: Individual

Date Received: January 11, 2017

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**Comment 7-1**

*"We have lived on Pratt Ave for more than 35 years, and have seen remarkable changes-many for the worse for small town living. With the remarkable expansion of Beringer, the new (UGLY) hotel at Grandview with a forgettable name on Hwy. 29, the railroad activity to Charles Krug, the waste water aromas of the ponds, the noise of the large neighborhood wineries, increased traffic, faster and faster cars coming through, the erosion of the quality of the road surface to below 3rd world countries; we have seen our neighborhood heading to hell."*

**Response 7-1**

Comments are noted; however, the concerns enumerated above are not project specific and therefore will not be addressed here.

**Comment 7-2**

*The ridiculous expansion of the dorm on Pratt Ave. will be a real nail in the crucifix. These students are people from all over the country who drive out here, do not help our local populace, waste water like tourists, leave as soon as they can, and add no value to this town.*

**Response 7-2**

Comment noted ; however, the concerns enumerated above are not project specific and therefore will not be addressed here.

**Comment 7-3**

*Finally, it appears the CIA is slowing or shutting down the Greystone Bldg. in preference for Copia, Napa. Are they going to shuttle them to Napa? Leave the CIA dorm as it is, please. If not, name it The West Coast Trump Tower!*

**Response 7-3**

As detailed in the project description on page 2 of the IS/MND, The CIA originally envisioned the campus at Greystone to operate as a continuing education facility, but it has since evolved to serve solely as an occupational educational facility offering an Associate in Occupational Studies (AOS) degree program and certificate programs. In 2004 the CIA acquired the Vineyard Lodge Housing site at 830 Pratt Avenue to support the trend towards occupational education and provide affordable housing for students. Consistent with the requirements of the City's Municipal Code, the subject sites currently have active use permits (93-105 for the Greystone Campus; 2004-33 for the

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Vineyard Lodge Housing site). Associate level classes will continue to be held at the Greystone Campus and there are no plans for a shuttle to transport Vineyard Lodge Residents to the Copia location.

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Commenter: Anthony Micheli

Status: Individual

Date Received: January 13, 2017

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#### **Comment 8-1**

*"The Crinella Pump station was built in 1965. It was only to service the Crinella subdivision of about 100 homes. Now the CIA has tied in on Pratt, all the recently built million dollar homes on Pratt with guesthouse, now the Las Alcobas hotel, with no upgrades from any of these developers. Yet the station is #8 on the list of improvements of capital expenses by the new wastewater cost increases. Why are we the residents paying for this and not the developers that are burdening the system. The CIA is going from 4750 gals/day to 10,783 gals/day in to the Crinella Pump station.*

*The enrollment was 101 students, now they want to more than double that size with 123 additional students without any impact fees or improvements to the Crinella Pump station. That is a 500% increase from the convalescent hospital capacity."*

#### **Response 8-1**

Please see Master Response 2.

#### **Comment 8-2**

*"In the report it says they want to take students out of homes they own and put them in these 3 new dormitory buildings. If that is true, then they have to provide the city with a legal document that they will sell these homes when the first dormitory is completed so these homes go back to hopefully the rental market that we desperately need. Also, their statement that their housing is affordable is not correct. I have spoken to students in their facilities and what they pay for a room is more than our rental market prices."*

#### **Response 8-2**

Comment noted.

#### **Comment 8-3**

*"Why are they able to build to 40' with these new buildings? I thought that we had a 35' height limit. These buildings are going to block the view for the neighbors of our beautiful hillsides. The view shed will be lost."*

#### **Response 8-3**

The Vineyard Lodge Housing site exhibits a zoning designation of PQP: Public Quasi Public. As detailed on page 39 of the IS/MND, The PQP zoning designation does not prescribe specific development standards, but rather stipulates that all projects within the PQP zoning district be subject to a conditional use permit and that development standards shall be established through the use permit review process. These regulations help guarantee that incompatible development and/or activities can be avoided by requiring such projects be held to a high level of scrutiny and are vetted

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through the public review process, CEQA review, and be conditioned accordingly. The Vineyard Lodge Housing Component will be subject to the provisions of a new use permit as required under PQP zoning which would govern the intensity and operation of the site to an extent that consistency with all applicable standards and guidelines is achieved. As promulgated by Zoning Code Section 17.68.050, building height is to be established in conjunction with use permit review and therefore, it is at the discretion of the Planning Commission to determine whether a 40' height is appropriate within the context of this specific project. There is however, no existing regulation or standard that would explicitly preclude a 40' height within the PQP zoning district. For a response to the concerns related to view shed impacts please refer to Master Response 1. No further analysis is warranted.

#### **Comment 8- 4**

*"They claim they don't need additional parking. I drive by the dormitories at least 3 times per day, on average the parking lot is between 70% to 80% full most of the time. They claim they only give out 33 permits for the existing 101 students, well then who owns the other vehicles? They claim that the shuttle goes every 15 minutes. To me that adds a larger impact at Pratt and Main. Now with the Las Alcobas Hotel across the street this is a bad intersection. There needs to be a traffic study addressing this. In fact, I feel we need an electric stop lights at this intersection. Most of the day the traffic does not go out onto Main, including truck traffic. They cut through Park and on to Crinella to Main. This is a residential neighborhood they are cutting through."*

#### **Response 8-4**

Please refer to Master Response 3.

#### **Comment 8-5**

*"They are going to demo a 15,050 sqft one-story building that houses 41 students. Then they are going to build three 3 story buildings totaling 40,645 and claim there is no impact. Who are they trying to fool? The Planning Commission needs to say: We need time to assess the full impact of this project. We have been told over and over again about our ageing infrastructure that is in dire need of repair. We need to find out first the impact the Las Alcobas Hotel is going to have in this area. An environmental impact report is the only way to address all the concerns I have raised."*

#### **Response 8-5**

See Master Response 6.

#### **Comment 8-6**

*"Originally the CIA was going to build three dormitories on the school's campus. This was so they would not impact the neighborhoods. That did not happen as promised in their original use permit. I would suggest the CIA instead of building these new dormitories on Pratt Av to put them on their campus as they originally proposed. The CIA owns the adjacent property. I personally worked Chuck Carpy's house as a general contractor. The city should rezone the property so dormitories can be built there. Then you eliminate all traffic problems, all view shed issues and since they are reducing their water usage at Greystone the increase of the dormitories can be applied. Plus the city should require these dormitories not use the city's wastewater system but put it in to Greystone's system that discharges in to the pond on Deer Park Road."*

#### **Response 8-6**

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Comment Noted. Please see Master Response 5 in regards to the evaluation of project alternatives.

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Commenter: Dianna Varozza

Status: Individual

Date Received: January 17, 2017

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#### **Comment 9-1**

*In regards to the Pratt Avenue project... It should be separate from the Greystone site paperwork. Trying to read through this is too difficult to determine what is going on at which site. They should be separate applications as they are different locations on different streets.*

#### **Response 9-1**

The City did receive multiple entitlement applications and the entitlements will be considered individually. However, under CEQA, projects may not be piecemealed (segmented) so as to ensure that all potential impacts are captured. Given that the use of Greystone and Vineyard lodge are so intimately tied it was determined that both components should be considered together. Accordingly, no changes are warranted.

#### **Comment 9-2**

*Is there going to be a stop light at Pratt and Main?*

#### **Response 9-2**

As detailed in the Traffic Analysis, the significance criterion established by the 1993 St. Helena General Plan and applicable to the subject project reads, *"All unsignalized intersections must maintain LOS C. If the LOS degrades below LOS C, an evaluation of the need for traffic signalization shall be undertaken according to standard Caltrans signal warrants as described below. If signals are not initially warranted, the location shall continue to be monitored for signal warrants on a regular basis."*

In accordance with the significance criteria applicable to the project, a warrant threshold analysis was undertaken to determine the need for signalization. There are 9 possible tests for determining whether a traffic signal should be considered for installation. As detailed on page 9 of the traffic Study (**Appendix Q**) These tests, called "warrants", consider criteria such as actual traffic volume, pedestrian volume, presence of school children, and accident history. The intersection volume data together with the available collision histories were compared to warrants contained in the Manual on Uniform Traffic Control Devices (MUTCD), Federal Highway Administration, 2014, California Supplement. As stated in the Traffic Impact Report and on page 52 of the IS/MND, signal warrant thresholds were *not* met and therefore signalization is not needed and no signal will be installed as a result of this project.

#### **Comment 9-3**

*I definitely object to a three story building. Nothing else directly on the street is that tall and if you set precedence now pretty soon there will be three story apartment buildings and homes. This is a quiet street mostly agricultural and it is very dangerous during going work and home hours. Between Beringer employees racing to get to the trail and all of the construction workers parking on*

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*Pratt and Main it has been a nightmare trying to pull out of the driveway or onto Main. More people used to walk on Pratt but now they are afraid.*

**Response 9-3**

See Master Response 1 and 4.

**Comment 9-4**

*"Where are all the construction workers going to park when they are working on this project? The garbage, pour parking jobs, construction trucks and deliveries have been chaos. The construction workers whip a u turn without looking and almost hit moving traffic. They block the view so pulling out onto main can be dangerous. They are trying to cross the street and almost get hit by cars. And now with Pratt closed why there isn't an officer there directing traffic. We can't even pull out and go to the store. It looks terrible having all those vehicles parked everywhere, delivery trucks, construction equipment. This all needs to be kept off Pratt Avenue."*

**Response 9-4**

As detailed on page 5 of the IS/MND, construction activities at the Vineyard Lodge Housing site are expected to occur in two overlapping phases following issuance of entitlements, Phase 1: January 2017 to August 2017 and Phase 2: June 2017- January 2018. Specific dates are subject to change, but the general phasing is expected to be consistent with what was assumed in the IS/MND. The applicant has indicated that construction staging would be located on site and in the proposed courtyard; site preparation and demolition staging is expected to occur on the existing parking lot. In order clarify this in the IS/MND; the project description will be updated to read:

**PROJECT PHASING**

Construction activities at the respective project sites are expected to commence following issuance of entitlements and will be phased in a manner that limits disturbance to class schedules and curriculum and in accordance with the phasing plan, below. Site preparation and demolition staging will occur on the existing parking lot and Construction phase staging will be located in the proposed courtyard between the new building and the existing Vineyard Lodge 1 for both phases.

**Comment 9-5**

*All of the dust created by construction is damaging to vineyard. If we get even a small amount of dust blowing we will have to get our lawyers involved. What are you going to do to mitigate the dust? I am just glad we weren't closer to the hotel construction. What a nightmare for the pour people on the corners.*

**Response 8-5**

As detailed on page 19 of the IS/MND and under section 3(D), the subject site is proximate to sensitive receptors, defined as those members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly and people with illnesses...Due to the proximity of sensitive receptors onsite, the project has the potential to generate temporary air quality impacts associated with fugitive dust emissions during construction activities.

In order to ensure that fugitive dust emissions are reduced to levels below significance Mitigation Measure AQ-1 would be implemented. AQ-1 is set forth pursuant to BAAQMD Basic Control Strategies and requires covering haul trucks, watering during active ground disturbance, limiting idling time, proper maintenance of equipment, and other standard measures. With implementation

of AQ-1 potential impacts to sensitive receptors during construction will be reduced to levels below significance. Specifically, AQ-1 stipulates that:

The applicant shall incorporate Best Management Practices for all construction activities and clearly indicate these provisions in the specifications. In addition an erosion control plan shall be prepared and submitted to the City of St. Helena prior to any construction activity. BMPs shall include but not be limited to the BAAQMD Basic Construction Mitigation Measures as modified below:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered three times per day;
2. All haul trucks transporting soil, sand, or other loose material shall be covered;
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited;
4. All vehicle speeds on unpaved roads shall be limited to 15 mph;
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible;
6. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used;
7. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points;
8. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation;
9. Construction equipment staging shall occur as far as possible from existing sensitive receptors;
10. The Developer shall designate a person with authority to require increased watering to monitor the dust and erosion control program and provide name and phone number to the City prior to issuance of grading permits. Post a publicly visible sign with the telephone number of designated person and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations; and
11. The City's Public Works Inspector shall perform visual inspections during grading to assure that dust control is implemented and standard BMP are enforced.

With implementation of AQ-1 and compliance with the provisions of the St. Helena Municipal Code potential impacts associated with fugitive dust and which could affect people or vineyards would be less than significant. No further analysis is therefore warranted.

#### **Comment 9-6**

*I would like an answer as to what we can do to stop the three story building and regulate the construction site parking and deliveries to be off Pratt. I am mostly concerned about the construction dust which will damage vineyards nearby. We are directly on the other side of the Beringer strip. They must be concerned about dust on their new block of vineyard.*

#### **Response 9-6**

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As stated above, under Response 9-4, construction staging will be located within the project site boundaries. For discussion of fugitive dust, please see Response 9-5.

**Comment 9-7**

*We live here and have guests at our winery and it needs to not look like a dump driving down Pratt Avenue.*

**Response 9-7**

Comment noted.

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Commenter: Carol Norfleet

Status: Individual

Date Received: January 18, 2017

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**Comment 10-1**

*My personal opinion is that the retirement home that was the original structure on the property should never have been changed to a dormitory for Culinary Institute students. I believe that if the CIA wants to have more students they should either construct a property on their Greystone campus on Highway 29 or build a new dormitory near the former Copia site in the city of Napa.*

**Response 10-1**

Comment noted.

**Comment 10-2**

*I believe the impact on Pratt Avenue and subsequent impact for the city of St. Helena all produce negative effects. Pratt Avenue is one of the poorest maintained streets in St. Helena. There are constant potholes in the road that are not properly repaired, the entire road needs repaving, there are no sidewalks, despite the fact that there is a CIA student bus that makes innumerable trips up and down the road there still are students regularly walking on the side of the road often in predawn and night hours creating a very dangerous situation. They are unable, generally, to walk on the traffic facing side of the street because at least six months of the year there is a stream of water running down the south side of the street that is emitted from a sump pump at the residence at 1055 Pratt Ave.*

**Response 10-2**

See Master Response 3.

**Comment 10-3**

*I strongly feel that the city either needs to create a storm drain to properly capture that water or to eliminate the exception that must've been created for dumping this sump pump water into the street. I will also note that despite the fact that rains stop in the area in the late winter that particular residence is in essence creating an artesian well in the full basement that pumps water seasonally into June creating a marsh and mosquito habitat at the intersection of Pratt Avenue and the railroad*



*tracks. It seems that every other street in St. Helena has proper gutter sidewalks and storm drains adjacent to residential homes except for this stretch of Pratt Avenue.*

**Response 10-3**

Comment noted. This comment does not relate to the subject project and therefore will not be addressed here.

**Comment 10-4**

*In examining the site plan for the new dormitory it's very clear that every single square foot of land is being used, packing on as much density as possible, exceeding height restrictions and visual sensibilities. There should not be a variance for building setback as proposed from 36 feet to 20 feet. Additionally the site plan has the exit from the plan coming directly into the intersection for the railroad tracks that are now being used for a wine train going up to Krug winery. A portion of the building is 40 feet high which is certainly not conducive to the rural nature of what this street is and clearly will affect other property owners in the area from a view point of view.*

**Response 10-4**

Comment noted. See Master Response 1 for a discussion of viewshed impacts.

**Comment 10-5**

*Despite the fact that there is a shuttle that goes to the Greystone campus it is inevitable that 123 new students are going to create much more traffic. I'd like to point that out several years ago there was a multiple fatality accident on Pratt at the end of the road involving some of the students from Greystone. It seems inevitable that doubling the size of the facility is going to significantly impact traffic use and noise on our street. This traffic impact also becomes immediately significant as one looks at the current extreme difficulty of making a left-hand turn from Pratt Avenue south on to Highway 29. It is currently extremely difficult to see what is approaching on the left-hand lane because of parked cars, at the very least the curb needs to be red painted at least six car lengths back from where it is now. Additionally with the pending opening of the Los Alcobas Hotel there will be additional significant difficulty in entering and exiting from Pratt Avenue. This will not only apply to the student buses but also to the students that would be coming and going from this dormitory. This currently is and will become a much more dangerous intersection certain to create accidents.*

**Response 10-5**

Comment Noted. It is expected that as a part of mitigation imposed on the Los Alcobas hotel project, parking will be prohibited along both sides of Main Street for a distance of 250 feet south of the Los Alcobas Hotel site, thereby improving site distance when making a left-hand turn from Pratt Avenue onto Main Street.

**Comment 10-6**

*We are all aware of some of the economic issues facing the city of St. Helena and clearly one way to solve them is to promote the development of architecturally appropriate high quality hotels that will attract individuals with the capability to afford a significant average daily rate and quality that would then provide subsequent TOT revenue to the town. What this proposal does instead is create a hotel with insignificant TOT from students who certainly are not going to significantly support high quality restaurants and retail shops within the city itself.*

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**Response 10-6**

Comment noted. Potential impacts to TOT revenue is not a potential environmental impact which is required to be analyzed pursuant to CEQA.

**Comment 10-7**

*As stated earlier our belief is that there should not be a variance for an expansion of the existing student housing facilities, instead CIA should examine other locations including their existing Greystone campus and or their new Copia campus in Napa to effectuate the expansion of their overall programs. Pratt Avenue should remain a rural and residential street not a street of student dormitories creating additional traffic noise water and sewer impacts with insignificant benefits for the existing residents of the street and the city of St. Helena.*

**Response 10-7**

Comment noted. As detailed in the IS/MND under Section XV11. Mandatory Findings of Significance, with implementation of mitigation measures set forth under Aesthetics, Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Land Use, Noise, and Transportation, the project's potential impacts would be avoided or reduced to levels below significance. Therefore, the project will have less than significant impacts due to degradation of the environment.

Commenter: Paul Bertoli

Status: Individual

Date Received: January 19, 2017

**Comment 11-1**

*"...Turning this project surrounded by ag land into the most densely populated parcel in St Helena, would seem to be totally against the will of the general plan. The plan frowns upon putting high/medium density in ag land(leapfrogging)"*

**Response 11-1**

As detailed on IS/MND page 39 and under section 9(b), the Vineyard Lodge Housing site exhibits a General Plan land use designation of Agriculture, which provides for, amongst other things, Public and Quasi-Public uses. In 2008 and per Resolution No. 2008-5, the Vineyard Lodge Housing site was rezoned from A-20:Twenty Acre Agriculture to PQP: Public Quasi Public. The Council found that this was an appropriate action based on the following findings enumerated in the Resolution:

1. The existing urban/developed condition of the parcel would make conversion to agriculture difficult.
2. The small size of the parcel (2.61 acres) makes it improbable that the land can be converted to an economically viable agricultural parcel.
3. The parcel has been in urban use for the last 40 years.
4. The parcel has not been farmed or agriculturally productive for the last 40 years.
5. The parcel is already served by City services (water & sewer).
6. Rezoning the parcel to PQP keeps the existing A-20 zoning ordinance language intact, does not introduce new uses to agricultural parcels, thereby lessening the possibility that other agricultural land will be used for non-agricultural purposes.

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The proposed project does not propose any zoning map amendments and proposes development consistent with the existing PQP zoning of the subject parcel which it has exhibited since 2008. As described on page 39 of the IS/MND, The PQP zoning designation does not prescribe specific development standards, but rather stipulates that all projects within the PQP zoning district be subject to a conditional use permit and that development standards shall be established through the use permit review process. These regulations help guarantee that incompatible development and/or activities can be avoided by requiring such projects be held to a high level of scrutiny and are vetted through the public review process, CEQA review, and be conditioned accordingly. The Vineyard Lodge Housing Component will be subject to the provisions of a new use permit as required under PQP zoning which would govern the intensity and operation of the site to an extent that consistency with all applicable standards and guidelines is achieved. No changes are warranted.

**Comment 11-2**

*"This will also add to the current traffic problem on Pratt, the new resort, wine train, Beringer/ treasury, ramping up production, redirection of traffic by apps,(waze, google, etc) the constant shuttles, will only add to the problem."*

**Response 11-2**

See Master Response 3.

**Comment 11-3**

*"Water& sewer issues, seeing hundreds of new toilets, while residents conserve water only to have the water rates skyrocket, just doesn't quite seem right."*

**Response 11-3**

As described herein and on page 56 of the IS/MND, The City of St. Helena provides water to both the Greystone Campus (2555 Main Street) and Vineyard Lodge Housing Site ( 830 Pratt Avenue). The current water allotments authorized by the Agreements allocate an average of 15,900gpd to Greystone and 4,750gpd to the Vineyard Lodge Site. The total allotment across the two sites amounts to an average of 20,650 gpd or 23.1 acre feet per year. As part of the CIA Master Plan project, the applicant is requesting to rescind the two separate agreements and adopt a new joint water agreement which would redistribute the gross water allotment across the two sites while maintaining the current total allotment of 23.1 AF per year. As such, *no* net increase in water use is proposed and the project will comply with the City's water neutrality requirements. No further analysis is needed.

**Comment 11-4**

*"The CIA doesn't allow student cars on campus, or want to rent homes in SH, this shouldn't be the resident's problem. People actually live here. I'm not so sure what this nonprofit, or not for profit status is, but I would suggest that they consider using only the facility they've already expanded .The community trusted it was all they needed. With our population at 4900 I would prefer seeing a reduction in enrollment, and a modest tuition increase, in order for the CIA to remain good neighbors."*

**Response 11-4**

Comment Noted.

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Commenter: Priscilla Dell

Status: Individual

Date Received: January 23, 2017

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**Comment 12-1**

*"They propose using groundwater. Although our aquifer is most likely adequately charged due to the recent rains it will not remain in that condition. This dormitory will be there for an undetermined length of time during which we will have the return of drought. We need our water for residents who live here and the industry that supports our economy. We are told that our wastewater system will require millions to bring it up to code. Why should we add this type of burden to the system?"*

**Response 12-1**

See Master Response 2.

**Comment 12-2**

*"The Culinary Institute relocated to Napa the only business that brought any revenue into our City namely their restaurant. Why should we the citizens be asked to share our precious water resource while they bring absolutely nothing to the community? No, I don't believe that closing the restaurant will balance out having 224 students taking showers and other domestic uses."*

**Response 12-2**

Comment noted.

**Comment 12-3**

*The height of the buildings will be offensive to nearby neighbors.*

**Response 12-3**

See Master Response 1.

**Comment 12-4**

*"This particular area of the City is already suffering from too much traffic and too little planning such as an additional stoplight at Pratt and Main."*

**Response 12-4**

See Master Response 3.

**Comment 12-5**

*"Why should they be allowed to build on agricultural land? This is seldom allowed to happen and why should it be allowed in this instance when they bring nothing of value to the community?"*

**Response 12-5**

See response 11-1.

### 3. REVISIONS TO THE IS/MND

- *The following changes to the language included in Sections 16(a) and 16(b) and on page 16 of the IS/MND, will be made, as shown, below:*

A. **(Exceed Wastewater Treatment Requirements)** Less Than Significant Impact: The project is not expected to exceed wastewater treatment requirements set forth by the Regional Water Quality Control Board. To accommodate wastewater flows generated at the Greystone Campus, the existing onsite primary treatment would be used, including one 3,000 gallon grease interceptor, two 7,500 gallon settling tanks and one 6,000 gallon settling tank, and a pump sump and pump to convey the SS flows to the Markham Combined Wastewater System (MCWS) located at Markham Winery on SR 29, north of St. Helena. Improvements to the existing dishwashing and other kitchen facilities, including replacement with more water and energy efficient equipment, in addition to the closure of the WSGR would reduce the overall water and wastewater demand for the site. Taken together, the proposed improvements will lead to a net decrease in flows conveyed and treated at the MCWS and will be within the authorized discharge amount of 14,850 gpd.

At the Vineyard Lodge Housing site, wastewater will be generated by dormitory restrooms, showers, and common areas. The project will utilize the existing sanitary sewer (SS). Effluent would undergo primary treatment in septic tanks and then be conveyed to the municipal sewer system through the existing 3" SS. The SS management system will be resized to accommodate a peak daily wastewater flow of approximately ~~9,520~~ 9,605 gallons per day (gpd) which equates to a projected net increase of ~~1,960~~ 3,232 gpd over the existing ~~capacity~~ average recorded flow of 6,373. Effluent will undergo primary treatment in septic tanks, which will produce effluent that is of higher quality than residential wastewater. A new equalization pump tank will be used to collect and store effluent. The equalization tank will provide approximately 12.5 hours of retention time at the anticipated peak daily flowrate of 9,520 gpd, and is sufficiently sized to allow for only off-peak discharge to the City's sewer system. The equalization pump will utilize on site storage capacity and equivalent pumps to maintain the same instantaneous peak flow discharge as the existing facility. As a result, there will be no increase to the instantaneous flow rate to the City sewer system and therefore no adverse effect on the sewer system capacity. No increases in peak flows are proposed to the City sewer system, and the timed dosing of primary treated effluent during off-peak hours would prevent any adverse impacts to the City sewers.

The wastewater flows will be conveyed to the City of St. Helena Wastewater Treatment Plant, which has sufficient operating capacity to handle the additional flows generated at the Vineyard Lodge Housing site. Further, the project will be assessed the sewer impact fee which will help to maintain the existing system and contribute to the additional costs that will be incurred with the future expansion and upgrade of the wastewater treatment plant. Therefore, the project would not exceed wastewater treatment requirements and impacts would be less than significant.

**b.(New Wastewater treatment Facilities)** Less Than Significant Impact: There would be no new construction or expansion of domestic water or wastewater facilities as part of the proposed project. For the Greystone Campus, as stated above, wastewater flows are expected to decrease following project implementation. For the Vineyard Lodge Housing

site, as stated above, the project would result in a net increase of ~~1,960~~ 3,232 gpd of wastewater over existing flows. However, the City of St. Helena Wastewater Treatment Plant has sufficient operating capacity to handle the additional flows generated at the Vineyard Lodge Housing site. Further, a sewer impact mitigation fee will be assessed with the purpose of ~~maintaining~~ improving the existing system and to contribute to offset costs of future expansion and upgrade of the wastewater treatment plant. The sewer impact fee will be assessed against the dormitory project at the time of issuance of building permits, therefore, impacts would be less than significant

**b.(New Wastewater treatment Facilities)** Less Than Significant Impact: There would be no new construction or expansion of domestic water or wastewater facilities as part of the proposed project. For the Greystone Campus, as stated above, wastewater flows are expected to decrease following project implementation. For the Vineyard Lodge Housing site, as stated above, the project would result in a net increase of ~~1,960~~ 3,232 gpd of wastewater over existing flows. However, the City of St. Helena Wastewater Treatment Plant has sufficient operating capacity to handle the additional flows generated at the Vineyard Lodge Housing site. Further, a sewer impact mitigation fee will be assessed with the purpose of maintaining the existing system and to contribute to offset costs of future expansion and upgrade of the wastewater treatment plant. The sewer impact fee will be assessed against the dormitory project at the time of issuance of building permits, therefore, impacts would be less than significant\

- *The following changes to the language included on paragraph 1 page 5 of the IS/MND, will be made, as shown, below:*

#### PROJECT PHASING

Construction activities at the respective project sites are expected to commence following issuance of entitlements and will be phased in a manner that limits disturbance to class schedules and curriculum and in accordance with the phasing plan, below. Site preparation and demolition staging will occur on the existing parking lot and Construction phase staging will be located in the proposed courtyard between the new buildings and the existing Vineyard Lodge 1 for both phases.

- *Since the release of the IS/MND, the applicant has requested minor modifications related to the size of the storage units proposed as part of the Greystone component. Namely, the applicant has proposed slightly larger storage units ranging in size from 622 sf to 1,337 sf. The proposed changes have been reviewed and would not introduce any new impacts or change the conclusions of the IS/MND. To reflect these technical changes, the following revisions will be made to Sections pages 4,12 and 25, of the IS/MND and as shown below:*

*Project Description, Paragraph 1, page 4.*

The proposal further includes the construction of a 4,468-square-foot (sf) storage cave at the north end of the Greystone Cellars building, beneath the former WSGR. In addition, a series of three modular storage units ranging in size from approximately ~~592 sf to 944 sf~~ 633 sf to 1,337 sf would be installed at the rear of the third floor of the Greystone Cellars building. Given that the majority of works is confined to the interior of the building, exterior changes would be very limited. Any work that may affect the exterior of the historic Greystone Cellars building (i.e. modular units) would be installed in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties so as to avoid impacting the building's historic integrity.

*Aesthetics, Setting, Page 12.*

The Greystone property is located on the west side of Highway 29 and features the historic Greystone Cellars (c.1888) a masonry building designed in the Richardsonian Romanesque architectural style. The Greystone property is highly visible and situated at the northern gateway to the City. Exterior modifications proposed for the Greystone building are limited to the introduction of a 4,468 square foot storage cave, which will be accessed from the loading dock retaining wall and not readily visible from the primary elevations, and the introduction of three modular storage units at the building rear which would be accessed via the existing roadway. The modular units will range in size from ~~592 sf to 944 sf~~ 633 sf to 1,337 sf and measure approximately 9'8" in height. The units will be located at the rear of the west elevation and supported on new structures that span across the existing exterior breezeway in a similar manner as the support structures used for HVAC units. The units will sit below the existing roof eave and will be utilitarian in nature and feature painted metal siding and doors with a flat roof shielded by a small parapet.

*Cultural Resources, Impact Analysis, Criterion A, Page 25.*

a) (Historic Resources) Less than Significant: The proposed work at the Greystone Site is confined to the Greystone Cellars building, along the west elevation and below the north end of the building. Three modular units ranging in size from ~~592 sf to 944 sf~~ 633 sf to 1,337 sf are proposed on the west elevation (rear) of the building. The units will be accessed from an existing roadway, supported on new horizontal steel structure that spans the area and similar to existing modern mechanical equipment supports. Utilitarian in nature, the units are constructed of painted metal siding, doors, and flat roofs behind shallow parapets.

- ***The following changes to the language included on the last paragraph of page 39 and in Section 9(b) of the IS/MND, will be made, as shown below:***

...In addition, the project has requested a variance from the parking standards outlined in Municipal Code Section 7.124.30(A.3) and stipulated for "rooming, boarding, or lodging houses" (determined to be the closest applicable land use identified in the zoning code), which require two spaces for the "resident owner" and one space for each guest room ~~bed~~, for a total of ~~226~~ 175 parking spaces based on this requirement for the gross total of 173 rooms (224 dormitory beds) which would result at the Vineyard Lodge Housing Site. At present, the site features 85 parking spaces, but based on data provided by the applicant, only 31% of students have a demand for parking spaces. As described herein, the CIA provides a shuttle service to students for transport to and from the Vineyard Lodge to Greystone, as well as transport offsite. Staff, including cleaning and maintenance staff, are shared by both sites and as such, staff typically park at the Greystone site and are shuttled to the

**4. SUMMARY**

In the course of preparing the written responses, information was generated and is presented throughout this document. The City of St. Helena carefully reviewed the information developed through the responses-to-comments process and determined that the project does not meet any of the conditions under CEQA Section 15073.5, as outlined below.

**15073.5. RECIRCULATION OF A NEGATIVE DECLARATION PRIOR TO ADOPTION.**

- a) A lead agency is required to recirculate a negative declaration when the document must be substantially revised after public notice of its availability has previously been given pursuant to Section 15072, but prior to its adoption. Notice of recirculation shall comply with Sections 15072 and 15073.



- b) A “substantial revision” of the negative declaration shall mean:
- 1) A new, avoidable significant effect is identified and mitigation measures or project revisions must be added in order to reduce the effect to insignificance, or
  - 2) The lead agency determines that the proposed mitigation measures or project revisions will not reduce potential effects to less than significance and new measures or revisions must be required.
- c) Recirculation is not required under the following circumstances:
- 1) Mitigation measures are replaced with equal or more effective measures pursuant to Section 15074.1.
  - 2) New project revisions are added in response to written or verbal comments on the project's effects identified in the proposed negative declaration which are not new avoidable significant effects.
  - 3) Measures or conditions of project approval are added after circulation of the negative declaration which are not required by CEQA, which do not create new significant environmental effects and are not necessary to mitigate an avoidable significant effect.
  - 4) New information is added to the negative declaration which merely clarifies, amplifies, or makes insignificant modifications to the negative declaration.
- d) If during the negative declaration process there is substantial evidence in light of the whole record, before the lead agency that the project, as revised, may have a significant effect on the environment which cannot be mitigated or avoided, the lead agency shall prepare a draft EIR and certify a final EIR prior to approving the project. It shall circulate the draft EIR for consultation and review pursuant to Sections 15086 and 15087, and advise reviewers in writing that a proposed negative declaration had previously been circulated for the project.

Therefore, the recirculation of a revised IS/MND or the preparation of an Environmental Impact Report (EIR) is not required. Consistent with the CEQA Guidelines, the added information clarifies the information and analyses in the IS/MND.

The City of St. Helena will consider the proposed IS/MND, together with this Response to Comments document, prior to approving the project.

Attachment 9; Public Comment 1

**From:** Tom Thurmond  
**To:** [Lilly Bianco](#)  
**Cc:** [Mary Ann](#); [Laura](#); [Linda](#)  
**Subject:** CIA Dorm Expansion  
**Date:** Friday, December 23, 2016 10:15:12 AM

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Lilly:

I own the vineyard and residential property at 675 Pratt Ave. I have significant concern about the effect of the CIA dorm expansion and other development on the properties along Pratt.

Pratt Avenue already has become very dangerous to drivers, bicyclists, and pedestrians. The road surface is in poor condition, which increases the likelihood of accidents leading to death or injury. Resurfacing the small portion from the CIA dorms to Main St. will not resolve that problem. The City needs to require a larger contribution from the CIA toward repaving ALL of Pratt Avenue.

There is a major problem with speeding along Pratt. Cars and trucks hurtle along day and night at speeds well over the limit, endangering other drivers, walkers, and bikers. The CIA expansion is bound to exacerbate this problem.

It is now often nearly impossible to make a left turn from Pratt onto Main due to the heavy traffic on Main. The CIA expansion will further add to this problem.

When you include the new Las Alcobas hotel on the west side of the intersection and the potential increase in traffic associated with Beringer's planned changes at their Pratt Avenue winery, it makes the situation even more dire.

I realize that the Pratt/Main intersection is under State control. Nevertheless, the City should proactively be taking measures to mitigate the problem.

With the current fiscal problems facing the City, it is incumbent on staff to require the maximum contribution from the CIA to help alleviate the problems they are making worse.

Tom Thurmond  
707-448-6976

Public Comment 2

**From:** tmbelt@comcast.net  
**To:** [Lilly Bianco](#)  
**Cc:** [Ellsworth, Geoff](#); [Galbraith, Alan](#); [Mary Koberstein](#); [Paul Dohring](#); [Peter White](#)  
**Subject:** City Invites Public Comment on CIA Expansion, Dorm Plans  
**Date:** Friday, December 23, 2016 5:21:32 PM

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Dear Ms. Bianco,

The big bucks behind the CIA needs to pay for the increase in size of the waste water line that will be needed to handle the CIA's new dormitories and increased burden of affluent. The current waste water line is already at capacity that services the Crinella housing tract. Adding another 9,520 gallons a day will over burden the line. It's about time our city management makes these big developers pay for the costs of necessary up grades to our utility infrastructures rather than keep passing them on to the current water and waste water customers. All we hear about lately is how inadequate our waste water facility is and how poorly our city's reputation is with the State Water Board. And now the CIA wants to add to this problem. They need to pay!

Also, the article in the Star leads the reader to believe the CIA wants to reallocate its current water use by changing its agreements with the city. If I read the article correctly, it looks like the CIA wants to use more ground water to make up for the demand at the dormitories. Does anyone meter the ground water currently being taken by the CIA? St. Helena has a moratorium on drilling new wells in the residential area of St. Helena, yet the city is okay with allowing the CIA to pump even more water from the ground. Come on St. Helena City Management, get your act together and make these businesses pay for the adverse impacts these developers and developments place on the residents who live here!

Tom Belt  
 1520 Hillview Place  
 St. Helena

Public Comment 3

**From:** Celia Lenson  
**To:** [Lilly Bianco](#)  
**Subject:** CIA Expansion  
**Date:** Monday, December 26, 2016 7:34:58 PM

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Good afternoon:

Thank you for posting the article in the Napa Valley Register regarding the expansions of the CIA dorms. My husband and I own house at 925 Pratt Avenue, St. Helena. The only concerns that I have are the following:

1. CIA Landscaping: Since the structure will double in size, I hope the City will consider that the dorms have beautiful landscaping to mitigate the size of the building. Such as Trees and California Native plants.
2. CIA Parking: The City has not enforced parking restrictions on CIA. Sometimes, all of Pratt street looks like a sea of cars. This is a displeased to the Community. No one likes looking at a parking lot considering the cost of the homes on Pratt Street.
3. Bike Lanes: The bikes lanes are a great idea. I hope the City restricts Pratt parking to the residents on Pratt street because CIA abuses the parking on Pratt. Many residents have complained

If all the issues are addressed, I welcome the dorms.

Celia Lenson, Owner  
of 925 Pratte Avenue, St. Helena, CA

Mailing Address  
1114 Clark Street  
Napa, CA 94559

Public Comment 4

**From:** Tittel/Caloyannidis  
**To:** [Lilly Bianco](#)  
**Subject:** CIA DORM EXPANSION  
**Date:** Tuesday, December 27, 2016 3:30:48 PM

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Dear Ms. Bianco,

I read in the St. Helena Star that questions regarding the CIA student dorm expansion may be directed to you.

Is there a definition to the application as to who qualifies as a student. I have to assume that whatever that definition is, any other tenants such as staff, instructors etc would be excluded and that there is associated language to that effect.

I would appreciate your response.

Thank you

George Caloyannidis

Public Comment 5

**From:** [Noah Housh](#)  
**To:** [Lilly Bianco](#)  
**Subject:** FW: CIA Dorm Project Meeting- Follow up  
**Date:** Tuesday, January 17, 2017 11:10:34 AM

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FYI

Noah Housh  
 Planning and Community Improvement Director  
 City of Saint Helena  
 (707) 968-2659

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**From:** Donna Hinds [mailto:[donna@donnahinds.com](mailto:donna@donnahinds.com)]  
**Sent:** Monday, January 16, 2017 11:19 AM  
**To:** Noah Housh  
**Cc:** Brian Russell  
**Subject:** CIA Dorm Project Meeting- Follow up

Noah,

Thank you for meeting with Brian Russell and me on Wednesday, January 11th. We appreciate your willingness to hear our concerns related to the CIA Dorm expansion project on Pratt Ave and evaluate them further. In summary, the following are the concerns we discussed:

- \* Inadequacies of traffic study;
- \* Inadequacies of noise study;
- \* Concerns related to parking variance;
- \* Concerns related to Visual impact;
- \* Concerns related to increased population;
- \* Concerns related to increased impacts on sewer/water;
- \* The lack of evaluation of alternative housing sites that would have less impacts on traffic, noise, visual, parking, etc.;
- \* The requested set back variance in contradiction with the general plan;
- \* The lack of rights to the vineyard road that is crucial to the project;
- \* The need for an Environmental Impact Report due to the significant size and potential impacts of the project.

What are the next steps? Will you be responding to these concerns? If so, when can we expect a response?

Best,

Donna Hinds  
 707-799-4844

Public Comment 6

**From:** Tom Rinaldi  
**To:** [Lilly Bianco](#)  
**Subject:** CIA Dorm Expansion  
**Date:** Wednesday, January 11, 2017 11:12:17 AM

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Dear Ms. Bianco:

Please do what you can to stop the CIA dorm expansion on Pratt Ave.

We have lived on Pratt Ave for more than 35 years, and have seen remarkable changes-many for the worse for small town living. With the remarkable expansion of Beringer, the new (UGLY) hotel at Grandview with a forgettable name on Hwy. 29, the railroad activity to Charles Krug, the waste water aromas of the ponds, the noise of the large neighborhood wineries, increased traffic, faster and faster cars coming through, the erosion of the quality of the road surface to below 3rd world countries; we have seen our neighborhood heading to hell.

The ridiculous expansion of the dorm on Pratt Ave. will be a real nail in the crucifix. These students are people from all over the country who drive out here, do not help our local populace, waste water like tourists, leave as soon as they can, and add **no value** to this town.

Finally, it appears the CIA is slowing or shutting down the Greystone Bldg. in preference for Copia, Napa. Are they going to shuttle them to Napa?

Leave the CIA dorm as it is, Please. If not, name it The West Coast Trump Tower!

Very respectfully yours,  
Tom Rinaldi  
707-963-3808



Public Comment 7

**From:** [Noah Housh](#)  
**To:** [Lilly Bianco](#)  
**Subject:** FW: CIA Pratt Avenue Project  
**Date:** Tuesday, January 17, 2017 12:43:02 PM  
**Importance:** High  
**Sensitivity:** Confidential

---

FYI

Noah Housh  
 Planning and Community Improvement Director  
 City of Saint Helena  
 (707) 968-2659

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**From:** Dianna Varozza [mailto:varozza@sbcglobal.net]  
**Sent:** Tuesday, January 17, 2017 12:40 PM  
**To:** Noah Housh; Jennifer Phillips; Sarah Parker; Mary Koberstein; Alan Galbraith; Peter White; Paul Dohring; Geoff Ellsworth  
**Cc:** Aaron Hecock; Bobbi Monnette; Tracy Sweeney; Grace Kistner  
**Subject:** CIA Pratt Avenue Project  
**Importance:** High  
**Sensitivity:** Confidential

In regards to the Pratt Avenue project... It should be separate from the Greystone site paperwork. Trying to read through this is too difficult to determine what is going on at which site. They should be separate applications as they are different locations on different streets.

Is there going to be a stop light at Pratt and Main?

I definitely object to a three story building. Nothing else directly on the street is that tall and if you set precedence now pretty soon there will be three story apartment buildings and homes. This is a quiet street mostly agricultural and it is very dangerous during going work and home hours. Between Beringer employees racing to get to the trail and all of the construction workers parking on Pratt and Main it has been a nightmare trying to pull out of the driveway or onto Main. More people used to walk on Pratt but now they are afraid.

Where are all the construction workers going to park when they are working on this project? The garbage, pour parking jobs, construction trucks and deliveries have been chaos. The construction workers whip a u turn without looking and almost hit moving traffic. They block the view so pulling out onto main can be dangerous. They are trying to cross the street and almost get hit by cars. And now with Pratt closed why isn't there an officer there directing traffic. We can't even pull out and go to the store.

It looks terrible having all those vehicles parked everywhere, delivery trucks, construction equipment. This all needs to be kept off Pratt Avenue.

All of the dust created by construction is damaging to vineyard. If we get even a small amount of dust blowing we will have to get our lawyers involved. What are you going to do to mitigate the

**Public Comment 7**

dust? I am just glad we weren't closer to the hotel construction. What a nightmare for the poor people on the corners.

I would like an answer as to what we can do to stop the three story building and regulate the construction site parking and deliveries to be off Pratt. I am mostly concerned about the construction dust which will damage vineyards nearby. We are directly on the other side of the Beringer strip. They must be concerned about dust on their new block of vineyard.

We live here and have guests at our winery and it needs to not look like a dump driving down Pratt Avenue.

Best regards,

Dianna Varozza  
707-963-0534

Public Comment 8

From: [redacted]  
To: [redacted]  
Subject: [redacted]  
Date: [redacted]  
Re: [redacted]

Jeffrey Lilly

Please is a complaint regarding the CIA access to process in the Planning.

Begin forwarded message:

From: Paul <[redacted]>  
Subject: Re: Big CIA Exposure On Front Ave Notice  
Date: January 5, 2017 at 7:24:11 PM PST  
To: "David Lerner" <[redacted]>, "Richard Lerner" <[redacted]>  
Cc: "Sherry Paul" <[redacted]>

Opinion: I think it's appropriate to comment and present this for whatever it's worth.

Please consider:

We've lived a year with constant worker traffic and construction noise from building (Los Angeles River); plus, all the cars constantly sharing CIA people and parked outside this house more than just a few times a year - we counted over 400 vehicles.

We had to call police because we had one girl from CIA (DOH) enter our house at night and sleep partially on our couch - we saw upstairs bedrooms (a strange sleeping matter) which was disturbing.

Plus there is noise coming down our street constantly - could say 70% of time we're home, including on early before rain, much that we get the trash cans out almost every week, to include, at large part of morning noise, making us sleep each time.

Not complaining - you saying that enough is enough and if you add this massive project and industrial facility to Front Ave - it's too much for the wonderful people who are paying a huge amount of money to live here expecting peace and serenity.

I hope you agree.

So I would not allow an someone who lives here and is trying to compare music quality and would not like to experience heavy construction noise and traffic for over 2 years that we join the neighbors here to present this.

Respect your property to let us know your thoughts.

This is covering our health options.

Thanks  
D.L.

See from my iPhone

Begin forwarded message:

From: Paul <[redacted]>  
Date: January 5, 2017 at 7:24:11 PM PST  
To: [redacted]  
Cc: [redacted]  
Subject: Re: Big CIA Exposure On Front Ave Notice

Calvin de Brink

We found this in our mailbox after missing from a few days away. I took a photo of page 1 attached.

It's a 3-page notice. Would you like us to read to you?

Thanks

David & Sherry

## Public Comment 9

**From:** Carol Norfleet  
**To:** [Lilly Bianco](#)  
**Cc:** [Philip Norfleet](#); [Noah Housh](#)  
**Subject:** Pratt Ave CIA Dormitory  
**Date:** Wednesday, January 18, 2017 9:02:37 AM

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Dear Ms. Bianco,

I am writing to oppose the expansion of the Greystone Vineyard Lodge facilities on 830 Pratt Ave. in St. Helena.

My understanding is that the proposed expansion will create 224 beds which is an increase of 123 students. My personal opinion is that the retirement home that was the original structure on the property should never have been changed to a dormitory for Culinary Institute students. I believe that if the CIA wants to have more students they should either construct a property on their Greystone campus on Highway 29 or build a new dormitory near the former Copia site in the city of Napa.

I believe the impact on Pratt Avenue and subsequent impact for the city of St. Helena all produce negative effects. Pratt Avenue is one of the poorest maintained streets in St. Helena. There are constant potholes in the road that are not properly repaired, the entire road needs repaving, there are no sidewalks, despite the fact that there is a CIA student bus that makes innumerable trips up and down the road there still are students regularly walking on the side of the road often in predawn and night hours creating a very dangerous situation. They are unable, generally, to walk on the traffic facing side of the street because at least six months of the year there is a stream of water running down the south side of the street that is emitted from a sump pump at the residence at 1055 Pratt Ave. I strongly feel that the city either needs to create a storm drain to properly capture that water or to eliminate the exception that must've been created for dumping this sump pump water into the street. I will also note that despite the fact that rains stop in the area in the late winter that particular residence is in essence creating an artesian well in the full basement that pumps water seasonally into June creating a marsh and mosquito habitat at the intersection of Pratt Avenue and the railroad tracks. It seems that every other street in St. Helena has proper gutter sidewalks and storm drains adjacent to residential homes except for this stretch of Pratt Avenue.

In examining the site plan for the new dormitory it's very clear that every single square foot of land is being used, packing on as much density as possible, exceeding height restrictions and visual sensibilities. There should not be a variance for building setback as proposed from 36 feet to 20 feet. Additionally the site plan has the exit from the plan coming directly into the intersection for the railroad tracks that are now being used for a wine train going up to Krug winery. A portion of the building is 40 feet high which is certainly not conducive to the rural nature of what this street is and clearly will affect other property owners in the area from a view

## Public Comment 9

point of view.

Despite the fact that there is a shuttle that goes to the Greystone campus it is inevitable that 123 new students are going to create much more traffic. I'd like to point that out several years ago there was a multiple fatality accident on Pratt at the end of the road involving some of the students from Greystone. It seems inevitable that doubling the size of the facility is going to significantly impact traffic use and noise on our street. This traffic impact also becomes immediately significant as one looks at the current extreme difficulty of making a left-hand turn from Pratt Avenue south on to Highway 29. It is currently extremely difficult to see what is approaching on the left-hand lane because of parked cars, at the very least the curb needs to be red painted at least six car lengths back from where it is now. Additionally with the pending opening of the Los Alcobas Hotel there will be additional significant difficulty in entering and exiting from Pratt Avenue. This will not only apply to the student buses but also to the students that would be coming and going from this dormitory. This currently is and will become a much more dangerous intersection certain to create accidents.

We are all aware of some of the economic issues facing the city of St. Helena and clearly one way to solve them is to promote the development of architecturally appropriate high quality hotels that will attract individuals with the capability to afford a significant average daily rate and quality that would then provide subsequent TOT revenue to the town. What this proposal does instead is create a hotel with insignificant TOT from students who certainly are not going to significantly support high quality restaurants and retail shops within the city itself.

As stated earlier our belief is that there should not be a variance for an expansion of the existing student housing facilities, instead CIA should examine other locations including their existing Greystone campus and or their new Copia campus in Napa to effectuate the expansion of their overall programs. Pratt Avenue should remain a rural and residential street not a street of student dormitories creating additional traffic noise water and sewer impacts with insignificant benefits for the existing residents of the street and the city of St. Helena.

Respectfully submitted,

Carol

Carol Norfleet  
*Director*

The Napa Valley Reserve  
1000 Silverado Trail N.  
St. Helena, CA 94574

Public Comment 9

T: (707) 968-3192

C: (707) 291-2338

[cnorfleet@thenapavalleyreserve.com](mailto:cnorfleet@thenapavalleyreserve.com)

[www.thenapavalleyreserve.com](http://www.thenapavalleyreserve.com)

## **St Helena Planning Commission – CIA Dormitories on Pratt Ave**

### **Members Planning Commission**

In the beginning the CIA dormitories were a convalescent facility. There were from 30 to 40 people there. They took sponge baths and used very little of the bathroom facilities. I personally know as I had relatives there. Somebody needs to go back in the records and see how much water was used as compared to today with the CIA dormitories.

Those 30 to 40 guests more than doubled with the first expansion by the CIA about 7 years ago. The first expansion did not require any upgrades to the Crinella Pump station where the effluent ends up, or any water impact fees.

The Crinella Pump station was built in 1965. It was only to service the Crinella subdivision of about 100 homes. Now the CIA has tied in on Pratt, all the recently built million dollar homes on Pratt with guesthouse, now the Las Alcobas hotel, with no upgrades from any of these developers. Yet the station is #8 on the list of improvements of capital expenses by the new wastewater cost increases. Why are we the residents paying for this and not the developers that are burdening the system. The CIA is going from 4750 gals/day to 10,783 gals/day in to the Crinella Pump station.

The enrollment was 101 students, now they want to more that double that size with 123 additional students without any impact fees or improvements to the Crinella Pump station. That is a 500% increase from the convalescent hospital capacity.

In the report it says they want to take students out of homes they own and put them in these 3 new dormitory buildings. If that is true, then they have to provide the city with a legal document that they will sell these homes when the first dormitory is completed so these homes go back to hopefully the rental market that we desperately need. Also, their statement that their housing is affordable is not correct. I have spoken to students in their facilities and what they pay for a room is more than our rental market prices.

Why are they able to build to 40' with these new buildings? I thought that we had a 35' height limit. These buildings are going to block the view for the neighbors of our beautiful hillsides. The view shed will be lost.

They claim they don't need additional parking. I drive by the dormitories at least 3 times per day, on average the parking lot is between 70% to 80% full most of the time. They claim they only give out 33 permits for the existing 101 students, well then who owns the other vehicles? They claim that the shuttle goes every 15 minutes. To me that adds a larger impact at Pratt and Main. Now with the Las Alcobas Hotel across the street this is a bad intersection. There needs to be a traffic study addressing this. In fact, I feel we need an electric stop lights at this intersection. Most of the day the traffic does not go out onto Main, including truck traffic. They cut through Park and on to Crinella to Main. This is a residential neighborhood they are cutting through.

They are going to demo a 15,050 sqft one story building that houses 41 students. Then they are going to build three 3 story buildings totaling 40,645 and claim there is no impact. Who are they trying to fool?

The Planning Commission needs to say: We need time to assess the full impact of this project. We have been told over and over again about our ageing infrastructure that is in dire need of repair. We need to

find out first the impact the Las Alcobas Hotel is going to have in this area. An environmental impact report is the only way to address all the concerns I have raised.

Originally the CIA was going to build three dormitories on the school's campus. This was so they would not impact the neighborhoods. That did not happen as promised in their original use permit. I would suggest the CIA instead of building these new dormitories on Pratt Av to put them on their campus as they originally proposed. The CIA owns the adjacent property. I personally worked Chuck Carpy's house as a general contractor. The city should rezone the property so dormitories can be built there. Then you eliminate all traffic problems, all view shed issues and since they are reducing their water usage at Greystone the increase of the dormitories can be applied. Plus the city should require these dormitories not use the city's wastewater system but put it in to Greystone's system that discharges in to the pond on Deer Park Road.

Hopefully the Planning Commission will deny the project until these concerns are addressed.



Anthony Micheli

1125 Crinella Dr  
St Helena  
Ph: 707-486-3832



Public Comment 11

**From:** Paul Bertoli  
**To:** [Lilly Bianco](#)  
**Subject:** CIA expansion  
**Date:** Thursday, January 19, 2017 4:07:54 PM

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Attn:contract planner,planning commission:

I am against the proposed expansion of the CIA Pratt Ave dorms.Turning this project surrounded by ag land into the most densely populated parcel in St Helena,would seem to be totally against the will of the general plan.The plan frowns upon putting high/medium density in ag land(leapfrogging)This will also add to the current traffic proplem on Pratt,the new resort,wine train,Beringer/treasury,ramping up production,redirection of traffic by apps,(waze,google,etc) the constant shuttles,will only add to the problem.Water&sewer issues,seeing hundreds of new toilets,while residents conserve water only to have the water rates skyrocket, just doesn't quite seem right.The CIA doesn't allow student cars on campus,or want to rent homes in SH,this shouldn't be the residents problem.People actually live here.Im not so sure what this non profit,or not for profit status is,but I would suggest that they consider using only the facility they've already expanded .The community trusted it was all they needed.With our population at 4900 I would prefer seeing a reduction in enrollment,and a modest tuition increase,in order for the CIA to remain good neighbors.

Thanks  
 Paul Bertoli  
 St.Helena  
 Sent from my iPhone

Sent from my iPhone

Public Comment 12

January 23, 2017

Noah Housh

Planning and Community Improvement Director

City of St. Helena

Dear Mr. Housh, I strongly object to the Culinary Institute of America building additional 123 room dormitory in the residential area of St. Helena. I object for the following reasons:

- They propose using groundwater. Although our aquifer is most likely adequately charged due to the recent rains it will not remain in that condition. This dormitory will be there for an undetermined length of time during which we will have the return of drought. We need our water for residents who live here and the industry that supports our economy. We are told that our wastewater system will require millions to bring it up to code. Why should we add this type of burden to the system?
- The Culinary Institute relocated to Napa the only business that brought any revenue into our City namely their restaurant. Why should we the citizens be asked to share our precious water resource while they bring absolutely nothing to the community? No, I don't believe that closing the restaurant will balance out having 224 students taking showers and other domestic uses.
- The height of the buildings will be offensive to nearby neighbors.
- This particular area of the City is already suffering from too much traffic and too little planning such as an additional stoplight at Pratt and Main.
- Why should they be allowed to build on agricultural land? This is seldom allowed to happen and why should it be allowed in this instance when they bring nothing of value to the community?

Priscilla Dell

25 San Juan Court

St. Helena, CA 94574

Public Comment 13

**From:** [Noah Housh](#)  
**To:** [Lilly Bianco](#)  
**Subject:** FW: CIA Pratt Avenue Project is too many bad points, needs to be cleaned up and down sized  
**Date:** Friday, February 03, 2017 12:18:39 PM  
**Sensitivity:** Confidential

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-----Original Message-----

From: Dianna Varozza [<mailto:varozza@sbcglobal.net>]  
 Sent: Friday, February 03, 2017 12:13 PM  
 To: Noah Housh  
 Subject: FW: CIA Pratt Avenue Project is too many bad points, needs to be cleaned up and down sized Sensitivity: Confidential

We need to make sure that these storage units don't end up here at the Pratt Ave location. This is a nice neighborhood and agriculture area. We are already picking up garbage and dealing with the traffic from the CIA dorms. More traffic and garbage would be really bad. All their event parking is done on Pratt also.

There is no employee parking for the hotel so they will park on Main St all the time. More foot traffic back and forth across Main Street and Pratt Avenue. With all the vehicles parked on that corner it has been a real challenge. Now they are going to have delivery trucks going back and forth to Beringer because that is where their storage is.

I don't shop in St. Helena anymore and that is because getting into town is a safety issue as well as a challenge. It is easier to go to Calistoga or Santa Rosa or Napa.

A lot of people walk on Pratt but these students from the CIA, hotel construction and the Beringer employees drive way to fast trying to get to a from work on the trail. It is like a raceway during commute hours or lunch times. The van from CIA is constantly trying to turn onto Pratt. Increase with more students and their trying to get to their storage units and that will make getting out on Pratt to go into town impossible. So people are going to go through Park and Crinella, there are small children playing and riding bikes there. Someone is going to get hurt or killed. A motorcycle pulled right out in front of me yesterday and if I hadn't been going really slow from turning off Main and because of the sign for the bridge I would have hit him. There were two large delivery trucks completely blocking the view of the street to the left.

There will always be deliveries once that hotel opens that will increase the traffic on Pratt significantly. Whether they are going to the hotel or to Beringer for unloading. Or trying to unload on the street and walk across.

If they want storage they need to build it up close to the CIA where they won't have to drive to get something.

They need to get rid of the third story because that is just going to cause problems all over town, if you let it in here, and it will block the view from the East side.

No more parking on the street and in the vineyard.  
 They need their own parking lot for events also.  
 The parking in the vineyards is going to be a real problem when they either get stuck in the mud or drive over a vine.

Public Comment 13

- Again using Pratt as a bypass and driving way too fast. Clogging up the access to the trail and main street for the people who actually live here and pay the taxes.

Look at the traffic when the trail was closed.

That is what is going to happen every day now that the bridge is closed. We can't even get off Pratt Avenue.

Do you want to know how many times I have turned off Pratt going North and the car in front of me SLAMS on their breaks and squeals the tires because that is the entrance to Beringer's tasting facilities. Now they are blocking North bound. Add in someone trying to cross Main in a truck to the hotel, a guest trying to turn in and go to the hotel or restaurant, a pedestrian and the South bound car coming out of the tunnel of trees at 50 mph. The CIA van trying to turn left onto Pratt.

You have a recipe for disaster and you better figure it out now before there is a death.

Dianna Varozza

Public Comment 14

Planning Commission

Dear Members,

We are writing to you at this time because we are opposed to the CIA expansion proposed to take place across the street from our property at 855 Pratt Avenue.

It is our opinion (which we expressed at that time) that the first CIA dormitory was not appropriate for the area of vineyards and single family residences. After that expansion we have had numerous problems. Frequent traffic with their shuttles and the occupants cars. Late night noise on many occasions. Pot smoking and beer drinking in our vineyard. When trespassers are asked to leave they often refuse to do so.

At the meeting for the previous expansion the CIA representative personally gave us his word that we had only to call him if we had any problems. Each time we called there was no response and never a call back. The situations were never resolved to our satisfaction.

As bad as it is now it will be much worse with twice as many transient occupants who have little or no interest in maintaining any good will with the neighbors during their brief stays.

We own two parcels directly across the street from the dorms. One 6 acre parcel has an old home and a cottage. Our son and his family reside there. The cottage is 500 sq. feet. We can only increase the footage to 800 sq. feet. The old house is supposedly of "historical significance" and hence cannot be razed or modified except to its original design. The original house was a single story with no bath or kitchen facilities.

On the 7 acre parcel we wanted to build a SINGLE story home located 300 feet back from Pratt and surrounded by 13 acres of vineyard. Permits were denied because it was deemed an inappropriate design for the area. We didn't realize if we wanted to build a three story house right next to Pratt we probably could have done so.

It is ironic that we were denied sensible uses for our property but a large commercial campus is being allowed in an area zoned for agriculture and single family housing. Is the continuous ruination of our neighborhood really worth the money the city will receive for allowing this expansion? We don't believe that it is. It certainly is not worth it to us as this very unattractive building just across the street with all its noise and traffic will lower the value of our property.

We strongly oppose any expansion of the CIA dormitory property either now or in the future.

Due to medical issues we may not be able to attend the meeting but we will try to attend.

Fred and Carol Papina  
855 Pratt Avenue

Handwritten signatures of Fred Papina and Carol Papina in cursive script.

## Public Comment 15

**Comments of Donna Hinds to  
Culinary Institute of America  
Campus Master Plan**

Dear Planning Commissioners,

Thank you for your time in serving on the Planning Commission and for considering these thoughts related to the CIA dorm expansion proposal for Pratt Ave. My comments and concerns related to this project stem not only from my ownership of two properties on Pratt Avenue,<sup>1</sup> but also from my interest in the general well-being of the City of St. Helena and the impacts this project will have on the City. The discussions in opposition to the project are based, in large part, on areas in which the project is in direct conflict with various provisions of the St. Helena Municipal Code ("Code"). I have quoted the Code throughout the discussion, and suggest that it may be beneficial to have a copy, for reference, while reading this paper. The project, as it relates to the Vineyard Lodge expansion, should be denied, as supported by the following facts and discussions.

**PROJECT FACTS:**

Due to the large volume of information submitted in the Initial Study/Mitigated Negative Declaration ("IS/MND"), together with five appendices, the following is a summary of factual information obtained from the IS/MND that will assist the reader while analyzing this project. (Page references are to the location of the information in the IS/MND)

- Proposed new building square footage: 40,645 (p. 6)
- Proposed demolition square footage: 15,050 (p. 6)
- Existing Vineyard Lodge II square footage: 12,612 (p. 4)
- Proposed Total square footage: 53,257 (12,612 + 40,645)
- Height of buildings: 36' to 40'2" (Appendix 4 Plans p. A101-A107)<sup>2</sup>
- Length of buildings: 112' to 162' (Appendix 4 Plans p. A 101-A107)
- Length of building B fronting on Pratt Ave: 150' (Appendix 4 Plans p. A 101-A107)
- Height of building B fronting on Pratt Ave: 36' (Appendix 4 Plans p. A 101-A107)
- Proposed front setback of building B: 20' (Appendix 4 Plans)
- Proposed side setback of building A: 13' (Appendix 4 Plans)
- Building A is 162' long x 87' wide x 40'2" high and has both 2 and 3 story elements. (Appendix 4 Plans p. A 101-A107)
- Building B is 150' long 42' wide and 36' high and is a two story building. (Appendix 4 Plans p. A 101-A107)
- Building C is 112' long x 42' wide and 40'2" high and is a three story building. (Appendix 4 Plans p. A 101-A107)
- Size of Pratt Vineyard Lodge Lot: 2.61 acre (p. 8)
- Zoning of Project Property: PQP (St. Helena Zoning Map)

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- Zoning surrounding proposed project: Agricultural (St. Helena Zoning Map)
- Location of project: Outside of Urban Limit Line (St. Helena Zoning Map)
- Current number of students at Vineyard Lodge: 101 (p. 5)
- Proposed number of students at Vineyard Lodge: 224 (p. 4)
- Net increase in students at Vineyard Lodge: 123 (p. 5)
- Proposed/Current Number of students at Greystone 47 (p. 4 )
- Total Increased students and Staff at Greystone: 58 (p. 3)
- Current Total number of students: 200 (p. 3)
- Proposed Total number of students: 300 (p. 3)
- Current number of students in outside housing: 52 (200 total, less 47 at Greystone, less 101 at Vineyard Lodge = 52 )<sup>3</sup>
- Proposed number of students in outside housing: 29 (300 total, less 47 at Greystone, less 224 at Vineyard Lodge = 29)
- Net decrease of students in outside housing: 23 (52 -29 = 23)
- Current number of parking places at Vineyard Lodge: 85 (p. 6)
- Proposed number of parking places at Vineyard Lodge: 72 (p. 6)
- Current ratio of students to parking at Vineyard Lodge: 101:85
- Proposed ratio of students to parking at Vineyard Lodge: 224:72

**DESIGN REVIEW CRITERIA:**

The following is a discussion of the design criteria that must be considered by the Planning Commission in reviewing all applicants. These are set forth in Section 17.164.030. While it requires the failure of only one factor for the Planning Commission to make a finding that the design criteria have not been met, this applicant has failed to meet the majority of the design criteria as follows:

**1. Consistency and compatibility with applicable elements of the general plan;** The project is not consistent and compatible with the applicable elements of the General Plan. The Vineyard Lodge is located beyond the Urban Limit Line ("ULL"). The intent of the ULL is to discourage urban sprawl and promote sensitive development which preserves the rural and agricultural lands around the City. The General Plan Guiding Policy 2.6.5, "*Encourages the continuation of agricultural and low-intensity uses adjacent to the ULL.*" The high intensity (massing, height, and building location near Pratt Ave.) of the Vineyard Lodge expansion project is not consistent with this General Plan Guiding Policy and, therefore, should be denied. The building setback variance that has been requested for Pratt Ave. is in direct violation of the General Plan. Pursuant to Section 17.112.050, there is a special setback of 36' on the northwest side of Pratt Ave. from the railroad track to the Napa River. The reason this provision was included in the Code is evidenced by Section 5.3.3 of the Transportation Element of the 1993 General Plan which provides: Guiding policies "*5.3.3 Preserve rights-of-way for future collector streets within the planning area of the City as follows: \* Starr Avenue from Pratt Avenue to Adams Street . . . The City recognizes that development may or may not proceed along the lines envisioned in this plan, and that some areas not currently identified for*

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*potential developments may in fact precede those that are so designated. The intent of the right-of-way preservation designation is to clearly define the interest of the City in maintaining the option for extending its collector street system into these areas. Special setback areas shall be established along collector streets to allow for future widening."* In summary, the special setback on Pratt Ave was established pursuant to the 1993 General Plan (our current governing General Plan) to allow for future widening due to Pratt's designation as a collector street. A variance to this special set back would be in direct contradiction of the General Plan and would result in the loss of ability to widen Pratt Ave in the future. It is not currently clear what traffic patterns will evolve over the next 5, 10 or 20 years and whether or not Pratt Ave. will be needed as a connector street. The topic was raised at the community workshop held on February 4, 2017, when a concerned citizen expressed the need of the City to preserve rights-of-way on connector streets and not give up these rights as was done on the Adams St. extension. As the traffic in St. Helena continues to increase, there may come a time in the future when the City wants to widen Pratt. The allowance of the requested variance would not only be inconsistent with the 1993 General Plan but would also be very short-sighted and result in the loss of the ability of the City to widen a collector street at some point in the future. The request for setback variance should be denied.

**2. Compatibility of design with the immediate environment of the site;** There is not compatibility of design with the immediate environment. The property surrounding the proposed project is zoned agricultural. The property is surrounded by vineyards, residences and residential home sites. The project is simply too massive, is in stark contrast and not compatible with the immediate environment and, therefore, should be denied.

**3. Relationship of the design to the site;** The proposed project is too large and not appropriate for the site. The project feasibility requires multiple variances from the Code and the use of a right-of-way from the neighboring property to the east. The main access road for the proposed project is located on this right-of-way. Section 17.112.010 provides "*Each building site in each zoning district shall be planned and arranged so as to occupy only that portion of a lot not otherwise required as a yard, setback easement, right-of-way, or other required open space;*" The easement has been included in the site plan, as if it is part of the property, but a close review of the northeast property line shows that the buildings have been placed within 13' of the property line. Has the City evaluated the rights under the easement? When will this easement expire? Does the easement allow all uses required by the project? Set back requirements from the northeast property line are not satisfied. Based on these facts, it is abundantly clear that the project design does not work within the site boundaries.

**5. Whether the design promotes harmonious transition in scale and character in areas between different designated land uses;** The design does not promote harmonious transition in scale and character in areas between different designated land uses. According to the St. Helena zoning map, the project is surrounded by A-20 zoning. Therefore, the Planning Commission should look to A-20 zoning requirements to determine whether there is harmonious transition in scale and character between the different designated land uses. The A-20 zoning sets forth development standards in Section 17.20.060. The front and side



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setbacks for A-20 zoning are 50'. The side setback from Building A to the property line on the northeast side is 13', far less than the 50' required by the surrounding zoning. In addition to the discussion related to the front setback in design review element 1., above, it is a standard zoning principle that the larger and taller the buildings, the greater the setback. The A-20 zoning provides for 30' maximum building height. The proposed 36' and 40'2" building heights are clearly not in harmonious transition with the surrounding vineyard and mountain view properties. The project should be denied for failure to promote harmonious transition in scale and character with the neighboring agricultural vineyard and residential properties.

**6. Compatibility with future construction both on and off the site;** Future construction on the site is not applicable. There are two future planned projects of residential construction located directly across the street from the proposed project. This proposed project is not compatible with these residential projects and should be denied.

**7. Whether the architectural design of structures and their materials and colors are appropriate to the function of the project;** The architectural design is not appropriate, due to the degree of intense massing (see prior discussions), and should be denied.

**8. Whether the planning and siting of the various functions and buildings on the site create an internal sense of order and provide a desirable environment for occupants, visitors and the general community;** The proposed buildings are so large that there is insufficient open space for the 224 proposed students. There appears to be insufficient outdoor green area. There is insufficient parking for students. There is no parking accommodations for visitors. Building B is located only 20 feet from Pratt Ave., which will subject the residents on the Pratt Ave. side of the building to road noise. The applicant has failed to meet design criteria 8 and the project should be denied.

**9. Whether the amount and arrangement of open space and landscaping are appropriate to the design and the function of the structures;** The amount and arrangement of open space and landscaping are not appropriate to the design and function of the structures. The visual impacts of this project cannot be properly mitigated by landscaping, due to the intensity of massing and height of the buildings, and the Applicant's request for a reduced setback from Pratt Ave. The PQP district includes the requirement for landscaping and screening.

"Screening" is defined as a "method of visually shielding or obscuring one abutting structure or use from another or from the public right-of-way by fencing, walls, berms or **densely planted vegetation**." Section 17.164.070 B.7 requires the proponent to submit a site plan showing the "location and size of existing and proposed planting and screening." Additionally, Section 17.68.060 B. provides "All planting strips, yards, setbacks and other required open space areas shall be landscaped in accord with a landscaping plan approved by the design review process." The Applicant's Landscaping Plan, shown in Drawing L2 of the Use Permit and Design Review submittal, the renderings of the front elevation of the 150 foot long, 36 foot tall Building B, which will be setback only 20 feet from Pratt Avenue, and the conclusion of the Vineyard Lodge Driveway Traffic Impact Report, Section E, regarding Sight Lines at the Vineyard Lodge Driveway, which states "Therefore, sight lines would be acceptable assuming that **no** landscaping is planted along the site frontage that would ultimately grow and block drivers

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views." are in contradiction with one another in the appropriate screening required by the Code. Additionally, the stand of American Sycamore trees, located along the northeast property line and proposed to screen the 162 foot long, 40 foot tall Building A, are deciduous and will not provide adequate screening of Building A particularly during the Fall and Winter months. The massing and height of the proposed dormitory buildings, combined with the requested front setback variance of 20 feet from Pratt Ave. and the stated traffic safety concern upon exiting the driveway, should landscaping be planted along the front of the property, renders the Applicant's Landscape Plan, Mitigation Measure (AES-1) ineffective and failing to meet Design Criteria 9 and, therefore, the project should be denied.

**10. Whether sufficient ancillary functions are provided to support the main functions of the project and whether they are compatible with the project's design concept;** There are several ancillary functions to support the main function that are lacking: parking; gathering space, green space, recreation area, and inadequate access drive for fire safety. (Some of these are discussed in more detail in other sections so will not be repeated here). The applicant has failed to meet design criteria 10 and therefore the project should not be approved.

**11. Whether access to the property and circulation systems are safe and convenient for pedestrians, cyclists and vehicles;** The preliminary grading and drainage plan that was provided on page UP4 of the plans (Page 113 of Appendix 4 of IS/MND) notes that the width of the access road is 16' in some places. Section 17.124.070 B. 1. provides that *"An access drive is a way located outside of the public right-of-way that provides vehicular access between the public street and the required parking for more than one lot, or for one lot if the length of the drive is greater than one hundred (100) feet."* The access drive in the Applicant's plans is greater than 100'. Section 17.124.070 B. 2. e. provides the following widths are the minimums that will allow for the safe passage of emergency vehicles. According to this Code Section, for residential developments having over 60 units, the minimum width (including two 2' shoulders) is 30'. Since the access roads for the proposed plans do not meet the minimum Code requirement for width, the project should be denied. Width of access roads are provided as minimums for safety of residents and should be strictly enforced. A reduction in the size of the access roads, contrary to the Code provisions, could result in future liabilities for the City. Section 17.124.070 B.2.a provides: *"All access drives shall be designed for two-way traffic, unless specified approval is obtained from the public works director and fire chief/fire code official to allow one-way access drives."* (Verification of approval of the fire chief should be obtained). Section 17.124.070 B.2.h. provides: *"An adequately sized firefighting operational area shall be provided as required by Chapter 15.36"* This required firefighting operational area is not evident on the plans and should, therefore, be verified. The Applicant has failed to meet design criteria 11 and, therefore, the project should be denied.

#### USE PERMIT FINDINGS:

The Findings required for a use permit are set forth in Section 17.168.050. as follows: ***"No use permit shall be granted unless all of the following general findings can be made:"*** This provision clearly states that if any one of these factors is not satisfied, "no use permit shall be

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granted." This project fails to meet Section 17.16.050 A., B., C., D., E., F., G., H., I., J., K., and L., as follows, and should, therefore, be denied:

**A. That the proposed use would not generate odors, fumes, light, glare, radiation or refuse that would be injurious to surrounding uses or to the community;** Due to the large size of the project, the number of students, the number of cars, and the outdoor lighting, this project will generate odors, fumes, and light glare that will be injurious to surrounding uses of residential homes. In addition to existing nearby residences, there are two planned residential building sites located directly across from the proposed project site. The Applicant has failed to meet finding A. and should, therefore, be denied.

**B. That the proposed use would not generate levels of noise that adversely affect the health, safety or welfare of neighboring properties or uses;** The proposed project will increase the total number of students from 101 to 224 in a very concentrated area. The Applicant's submitted Noise Study states, "*Gatherings could include up to 120 students who would live on the site. Residential neighbors near the project site have expressed concern that these gatherings and other activities could generate noise.*" The Noise Study only contemplates 120 people speaking at the same time at an outdoor event. Numerous unanswered questions and unintended consequences arise, with respect to noise, when the other 104 residents have to be accounted for when participating in an outdoor event. A second statement in the Noise Study, "Student activities are not expected to result in noise that can be heard at the property line between the hours of 10:00 p.m. and 7:00 a.m." The Noise Study did not take into account the proximity of the two residential building sites located directly across the street from the Vineyard Lodge site. Notwithstanding the existing rules prohibiting outside amplified music, the observance of a 9:30 p.m. curfew, and non-residents not allowed to attend events, the idea that 224 college students will not generate an increased level of noise, at any hour, that exceeds the normally acceptable range is beyond credulity. Until proven otherwise, the Applicant has failed to meet the standards of use permit finding B and the project should be denied.

**C. That the proposed use would not generate traffic noise in excess of the normally acceptable range identified in the general plan;** The increase in traffic noise from the operation of 72 cars located onsite at the Vineyard Lodge was not addressed by the Noise Study. Rather, the Noise Study was limited in focus to the A.M. and P.M. peak shuttle bus trips to and from the Vineyard Lodge/Greystone. The Noise Study was conducted during a period when the Vineyard Lodge was unoccupied by students<sup>4</sup>, therefore, no student car derived noise was measured and included in the calculations to ascertain if the proposed 72 permitted cars will generate traffic noise in excess of the normally acceptable range. The Applicant has failed to adequately address use permit design criteria C and the project should be denied.

**D. That the proposed use would not make excessive demands on the provision of public services including water supply, sewer capacity, energy supply, communication facilities, police protection and fire protection;** The proposed project could potentially make excessive

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demands on the municipal water supply and municipal sewer capacity as well as other public services. The Applicant's request to expand student enrollment from 200 to 300 students will be adding 100 people to our community. The Association of Bay Area Governments ("ABAG") projection that St. Helena's population will increase by 400 by 2040 does not include these additional 100 students. With a focus on managed residential growth in the City of St. Helena, the City's Residential Growth Management System limits growth in order to ensure the City can provide adequate public services and infrastructure. The proposed Vineyard Lodge expansion project is not exempted from the Residential Growth Management System, Section 17.152.040.<sup>5</sup> Given the scarcity and rising rates of the City's potable water supply and the tenuous condition of the municipal sewer system, the Applicant should not be granted a use permit based on the theoretical future demands of water allocation and wastewater discharge volumes. Notwithstanding the reported water allocation offsets of the proposed project, the Applicant's Water Availability Analysis reports historical annual water usage that has exceeded its corresponding annual water allocations. There is no certainty that the Applicant's proposed redistribution volumes will not exceed water allotment in the future. Similarly, with respect to wastewater discharge volumes, the Vineyard Lodge project is theoretically projected to increase from 6373 gpd to 9520 gpd (an increase of 49%) and the onsite equalization pump tank is sufficiently sized to allow for only off-peak discharge to the City sewer. Again, notwithstanding any theoretical wastewater offsets anticipated at the Greystone campus, the unintended consequences of increased wastewater discharge from the expanded Vineyard Lodge project have not been fully contemplated, as a function of future development, in the area of the City served by the Crinella Lift Station. In consideration of the limited public services of the City, the Applicant's requested increase in enrollment from 200 to 300 students, combined with the proposed expansion of the Vineyard Lodge project to house these additional students, as compared with the higher benefits of other market rate and affordable residential projects competing for the same limited resources and building permit allocations, is not supported and the use permit should be denied.

***E. That the proposed use would provide adequate ingress and egress to and from the proposed location;*** The project has failed to provide adequate ingress and egress to and from the proposed location and should be denied. (See previous discussion under Design Review Criteria 11, above.)

***F. That allowing the proposed use would not conflict with the City's goal of maintaining the economic viability of a local-serving economy;*** The proposed project will conflict with the City's goal of maintaining the economic viability of a local-serving economy. Revenue generation is a key factor for St. Helena. The City is facing major challenges with regard to economic development. These challenges include, but are not limited to, the constrained capacity of local infrastructure, lack of available water supply and associated rising water rates and increasing traffic volume. The Applicant's request to increase enrollment from 200 to 300 students and increase the Vineyard Lodge housing capacity does not support increased local economic development. The Applicant has moved the majority of its tourist focused, revenue generating activities and services to the new Copia center in the City of Napa. The Greystone

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campus will become more student education and less tourist activity oriented. As a result, St. Helena will be allocating a portion of its finite infrastructure resources without any increased economic benefit. On the contrary, if these same limited infrastructure resources are allocated to higher economically beneficial uses (i.e. hotels, restaurants, ancillary supporting businesses) the City's local-serving economy and long-term economic sustainability will be greatly enhanced. The Applicant's proposed project presents a conflict to the goal of maintaining the economic viability of a local-serving economy and the use permit request should be denied.

**G. That the proposed use would be compatible with surrounding land uses and would not conflict with the purpose established for the district within which it would be located;** The proposed use is in conflict with the surrounding land uses and would conflict with the purpose established for the district within which it would be located. Since surrounding properties are agricultural and residential, the proposed use is clearly in conflict. (See discussion under Design Review Criteria 5, above.) The Applicant has failed to adequately address use permit finding G and the project should be denied.

**H. That the proposed use would not be in conflict with the City's general plan;** The proposed use is in conflict with the City's general plan. (See discussion under Design Review Criteria 1, above) and should be denied.

**I. That the proposed use would not be injurious to public health, safety or welfare;** The proposed use would be injurious to public health, safety or welfare. (See discussion under Design Review Criteria 8 and 11, and Use Permit Findings A, B, and C) and should be denied.

**J. That granting the use permit would not set a precedent for the approval of similar uses whose incremental effect would be detrimental to the City or would be in conflict with the general plan;** The granting of this project would set a precedent for the approval of very large three story buildings. I do not believe there are any other three story buildings, beyond the central business district, in the City of St. Helena. Allowing a three story, 40'2" tall building outside the Urban Limit Line will set a dangerous precedent. If the variance is allowed to the special Pratt Ave. setback, precedent will be set to allow variances along the entirety of Pratt Ave. Additionally, precedent will be set to allow variances to other special setbacks on other connector streets. These precedents would be detrimental and, therefore, the use permit for this project should be denied.

**K. That, as demonstrated on a detailed plan submitted by the applicant, adequate off-street parking to accommodate the long-term parking needs of employees and business owners and customers is available;** The applicant has failed to provide for adequate off-street parking. Section 17.68.060, related to PQP standards and requirements, provides *on-site parking and loading shall be provided in accord with the provisions of Section 17.124*. Section 17.124.030 A. 3. sets forth the required number of parking spaces for "rooming, boarding, or lodging house as: two spaces for the resident owner plus one space for each guest room." Applicant is required to provide for a minimum of one space per room. The Applicant is proposing to increase student occupancy from 101 to 224 while decreasing parking spaces from 85 to 72. The Applicant is adding 123 students and decreasing parking spaces by 13. This proposal is

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based on the Applicant's contention that the current student parking demand at the Vineyard Lodge site is 31%. During the performance of the Traffic Impact Report, parking demand was counted at 44%. Further, the reported student parking demand at the Greystone Campus is 70% (TIR). This wide discrepancy in student parking demands is in contradiction with the Applicant's request for a variance of the parking requirements. Rather, it appears the basis for the Applicant's request for 72 parking spaces is based on the limitation in available remaining space due to the large building program on the property. Section 17.124.50 A. makes it very clear that an expansion or increase in occupancy can be made "*provided that **additional parking space shall be provided** in the extent of the change as required in Section 17.124.030.*" The Code language "shall" appears to be a mandate that changes in projects, such as this, must provide for additional parking. The proposed project has failed to meet minimum parking standards as required by the Code and should be denied.

***L. That the capacity of surrounding streets is adequate to serve the automobile and delivery truck traffic generated by the proposed use. Design Criteria (Zoning Code 17.164.030).*** The intersection of Pratt Avenue and Main Street is a major entry/exit point for the City of St. Helena. The City should take upmost precaution in approving projects that could potentially impact the traffic along the entire stretch of Main Street. The traffic impacts of the Los Alcobas property have not been fully realized and Beringer has proposed a project that will also have traffic implications. The City should proceed with great caution and insure that the traffic impact studies submitted by the Applicant are to the level that would be required by an Environmental Impact Report.

**ZONING DESIGNATION:**

The property on Pratt Ave. is zoned PQP. The original zoning was A-20 and changed to PQP in 2008 to accommodate the non-conforming dorm expansion. Chapter 17.68 of the Code sets forth the provisions related to PQP zoning. Section 17.68.010 A. states "*It is the purpose of the PQP public and quasi-public district to provide for government-owned facilities, public and private schools and quasi-public uses such as churches and cemeteries.*" The PQP zoning provisions do not seem to contemplate housing. The 2008 Planning Commission may have improperly zoned the property to PQP to allow for dormitories. If this is the case, the mistake of the improper zoning should not be extended further and additional dormitories on this property should not be allowed.

**ENVIRONMENTAL IMPACT REPORT:**

It seems evident that there is sufficient grounds to deny this project on the basis of design review and the failure to meet the requirements of a use permit. Since the project cannot pass on design review and use permit, the issue of requiring an Environmental Impact Report becomes irrelevant. In other words, the Applicant should not be required to perform an EIR if the Planning Commission determines that it is not able to approve the project based on design. In the event the Planning Commission does consider the necessity of an EIR, it is clear that an

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EIR is required for this project for the following reasons: Identification and mitigation of multiple significant impacts of this project have not been met.

#### **ALTERNATIVE HOUSING OPTIONS:**

Based on the numerous variances required and non-compliance with multiple Code provisions and design review standards, it is clear the proposed project does not work on the Vineyard Lodge site. Although it is not the role of the Planning Commissioners to instruct applicants as to how or where to design their projects, the CIA owns other properties in the area that may be more suitable for housing additional students. In 1993, the St. Helena Planning Commission approved plans for two dormitories on the CIA Greystone property. Another property owned by the Applicant is a 5.49 acres parcel located adjacent to the Greystone campus to the south. Locating additional dorms on either the Greystone campus or the property adjacent to the Greystone campus would have much less impacts in the community in terms of visual, parking, traffic, etc. than the proposed project. Another consideration is that Pacific Union College is currently under-enrolled and the dormitories are not at full capacity. Entering into an agreement with Pacific Union for housing additional students would have far fewer impacts than the proposed project and may be economically more beneficial to both PUC and the CIA.

#### **NEIGHBORHOOD MEETING:**

A neighborhood meeting was held on April 2, 2016. This meeting was noticed by the City Planning Department and was attended by Tom Bensel, Victor Carniglia (on behalf of the City) and several concerned neighbors. It seems as if this meeting was purely to “check a box” that the Applicant met with neighbors. Various questions and concerns were raised by the neighbors in attendance. Based on the plans submitted, the Applicant did not address any of the concerns raised at the meeting. Three of the concerns I raised related to the height of the buildings, the proximity of the buildings to Pratt Ave. (set back), and whether there would be sufficient off-street parking so that no overflow parking would occur on Pratt Ave. A follow up meeting was not held and I was never contacted by Tom Bensel again. When I saw the plans that were submitted to the City, it became very clear to me that the Applicant not only failed to address our concerns, but actually went in the opposite direction of the concerns expressed at the meeting. At the neighborhood meeting, the representation was made that the buildings would be two story. In spite of the fact that I expressed concern over the height of the buildings, the submitted plans include buildings that are three stories tall and 40’2” high. At the neighborhood meeting, I specifically asked how far back the buildings would be setback from Pratt Ave and stated that I felt they should be set back as far as possible. The applicant replied at the meeting that he did not know how far the buildings would be set back. When I saw the submitted plans, I was very disappointed to see that the setback from Pratt Ave. was proposed at 20’ and would require a variance from the special setback that applies to Pratt Ave. As to the question of sufficient parking, the design decreased parking by 13 while increasing the

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number of students by 123. Again, there is a feeling that the applicant only held this meeting to “check a box” and not to sincerely address the concerns of the neighbors.

**MERIT BASED DECISION:**

The CIA has voluntarily decided to purchase the COPIA building in the City of Napa for a reported \$12.3 million, plus renovation investment, and to relocate many of their tourist activities to the City of Napa. This reference to moving tourist activities is made throughout the IS/MND. As an example of the tourism activities moving to the City of Napa, the Flavor Napa Valley website (a large CIA event) lists hotel packages for tourists planning their stay for the event. All of the hotel packages are in the City of Napa.<sup>6</sup> What about St. Helena? There have been recent newspaper articles (San Francisco Chronicle and Napa Valley Register), quoting Tom Bensel, related to the opening of Copia. These newspaper articles are attached for your convenience. Some of the more relevant quotes from these articles are: *“The Culinary Institute of America is opening its newest campus, at the Copia building in Napa, in stages, beginning with classes this week. ‘This will be the public face of the CIA,’ said Tom Bensel, managing director for both Napa Valley campuses, including the original site at Greystone in St. Helena.”*<sup>7</sup> *“The opening of the Copia building allows the Greystone St. Helena campus to focus on education for the students and also to undertake much needed renovations, Bensel said.”*<sup>8</sup> In another article discussing the opening of the new Copia center in Napa: *“Tom Bensel, managing director of the institute’s California campuses, says it will increase the recreational cooking classes offered at St. Helena and move them to Napa.”*<sup>9</sup> The CIA has chosen to redirect the majority of its tourist revenue generating operations from St. Helena to the City of Napa and is now asking St. Helena to approve a project that will place additional burdens on the City’s infrastructure and finite resources. The proposed project does not meet the standards required for design review or for a use permit. The CIA has submitted this project, without regard for the comments and concerns of the neighbors, without deference to Municipal Code provisions, and without completing a full Environmental Impact Report which would clearly define all environmental impacts. It is incumbent upon the Planning Commission to make the determination of this project without regard for whom the applicant is, but rather, based on design review standards and use permit findings.

**CONCLUSION:**

There are multiple reasons this project should be denied. The proposed project fails to meet the design criteria required for approval of projects as set forth in Sections 17.164.030 A. 1., 2., 3., 5., 6., 7., 8., 9., 10., and 11. The proposed project fails to meet the requirements for a use permit set forth in Sections 17.16.050 A., B., C., D., E., F., G., H., I., J., K., and L. The proposed project also requires the granting of multiple variances that would be detrimental to the community and would set negative precedents for future projects. While there are multiple significant reasons this project fails to meet design review standards and use permit standards,



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it only takes a finding of one reason of the many outlined above to deny this project. For the reasons stated throughout this paper, this project should be denied.

## Footnotes:

<sup>1</sup> Rusty and Donna Hinds own a 1 acre property (777 Pratt Ave.) that is diagonally across the street from the CIA Dorm project. This property was purchased as a residential homesite. The Vineyard Lodge property is less than 50 feet from this property. Additionally, Rusty and Donna Hinds own a 1/3 acre property (1057 Pratt Ave.) this is located between the Vineyard Lodge project and Main Street.

<sup>2</sup> Applicant describes building heights as 29' to 40'2" (Page 4 of IS/MND) but buildings heights are typically measured at the highest point. If measured at the highest point the buildings range from 36' to 40'2".

<sup>3</sup> In the chart on P. 6 of IS/MND Off-site Beds are not stated as "N/A." Applicant has not discussed offsite housing.

<sup>4</sup> P. 9 IS/MND states "The existing CIA facility was unoccupied as students were on break."

<sup>5</sup> **17.152.040 Exempted and regulated development categories.**

A. Exempted Development Categories. This chapter shall not apply to the issuance of building permits for the following projects:

1. Industrial;
2. Commercial;
3. Commercial/residential (daily rental);
4. Replacement housing (on the same site as a preexisting unit which has been removed, demolished or burned within the immediately preceding two years) but not in conjunction with subsection (A)(5) of this section;
5. Relocation of units already existing in the city;
6. Additions, renovations and refurbishment of existing dwelling units;
7. Accessory buildings of any type (except dwelling units);
8. Guest cottages (detached bedroom(s) without kitchen facilities);
9. Second units as defined in Section 17.04.160 and regulated by Section 17.116.030;
10. Affordable Housing. Affordable units are those dwelling units which are required to be rented at affordable rents or purchased at an affordable sales price, consistent with Chapter 17.146. The number of affordable housing units constructed shall be determined by the city council at the time of review of the development agreement authorizing the units. The agreement shall contain guarantees that the dwelling units would continue to be affordable to persons of very low, low, or moderate income for an agreed upon period of time.

<sup>6</sup> [www.flavornapavalley.com](http://www.flavornapavalley.com). Click on "Events"; then Click on "Hotel Packages";

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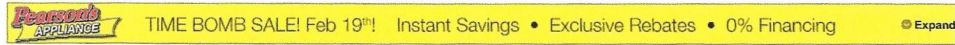
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<sup>7</sup> CIA at Copia opens in Stages. Sasha Paulsen, Napa Valley Register, October 18, 2016 (article attached)

<sup>8</sup> CIA at Copia opens in Stages. Sasha Paulsen, Napa Valley Register, October 18, 2016 (article attached)

<sup>9</sup> Napa's Copia to reopen as Culinary Institute of America campus, Tara Duggan, San Francisco Chronicle, October 16, 2016 (article attached)

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[http://napavalleyregister.com/lifestyles/food-and-cooking/cia-at-copia-opens-in-stages/article\\_5baa32fc-951a-5a91-ab1a-e8aee65d9dfa.html](http://napavalleyregister.com/lifestyles/food-and-cooking/cia-at-copia-opens-in-stages/article_5baa32fc-951a-5a91-ab1a-e8aee65d9dfa.html)

## CIA at Copia opens in stages

Sasha Paulsen spaulsen@napanews.com Oct 18, 2016



Phil Mansfield photo

Food and wine classes are now being offered at the Napa Valley Vintners Theater at the CIA at Copia in Napa.

The Culinary Institute of America is opening its newest campus, at the Copia building in Napa, in stages, beginning with classes this week.

"This will be the public face of the CIA," said Tom Bensei, managing director for both Napa Valley campuses, including the original site at Greystone in St. Helena.

Leading a tour through the Copia building, where renovations are ongoing, Bensei gave an overview of the plans as they are evolving for the space. When completed it will offer classes and food and wine programs for the public, extensive event space, a "lifestyle" shop, and a restaurant with a new

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approach to dining. There will be no entrance fee to the building, and Bensei stressed that the CIA wants to welcome both local residents and visitors to the facility when construction is complete. There will be fees for individual classes. He said a grand opening is planned for 2017.

The Vintners' Hall of Fame, now in the Barrel Room at the historic Greystone building will be relocated to Copia and renamed the Wine Hall of Fame, Bensei said. It's expected to be in place by spring 2017.

"CIA at Copia is a first for the Culinary Institute of America," he said, noting that the new facility will be "entirely dedicated" to offering food and wine education and experiences to the public. "It opens a window into what the CIA truly is: a visionary thought-leader and innovator in food and beverage, with world-class faculty and facilities."

The opening of the Copia building allows the Greystone St. Helena campus to focus on education for the students and also to undertake much needed renovations, Bensei said.

The CIA at Greystone opened 20 years ago in what had been the Christian Brothers Winery. Initially, it offered a pastry and dessert training, as well as specialized educational classes for chefs. Over the years, as public interest has grown in cooking programs, the CIA began offering classes for food and wine enthusiasts, and expanded its professional training programs.

The 80,000 square-feet of indoor and outdoor event and theater space at Copia will now be the site for daily programs, wine tasting and classes taught by CIA instructors and guest lecturers that feature seasonally-themed recipes designed for home kitchens.

Beginning on Monday, Oct. 17, the CIA is offering daily food and wine programs in newly named Napa Valley Vintners Theater, formerly the Meyer Food Forum. The 72-seat theater is equipped with a demonstration kitchen. The first classes include "Basic Flavor Interactions," "Cooking With Wine," "Fresh Home-made Cheese" and "How to Make Fresh Pasta."

Sundays have been designated "Family Fundays" beginning with an Oct. 23 class "Mac and Cheese," which will "re-imagine" the classic.

A complete schedule with tickets and prices is available at <http://ciaatcopia.eventbrite.com>.

"CIA at Copia's educational programming takes our enthusiast programming to another level, for people of all ages and interests," Bensei said.

### The Restaurant at CIA Copia

The anticipated opening date for The Restaurant at CIA Copia is mid-November. What was once Julia's Kitchen at Copia has undergone a face-lift for the new restaurant, which will be open for lunch and dinner, under the direction of Wally Malouf, CIA's senior director of food and beverage operations, and chef de cuisine Chris Aken.

Malouf, who is based at the CIA in Hyde Park, N.Y., told the Register that the plan for dinner service is to blend front and back of the house service for an innovative approach to service in which chefs will come out of the kitchen to offer dishes to diners. In this way, he said, guests will be able to see both the savory and dessert dishes and also meet the chefs who create them. Sharing dishes will be encouraged as part of this "experiential dining" approach. Dishes diners select will be marked on the menu, and the number of dishes selected will be tabulated at the end of a meal.

In the same way, Malouf said wines by the glass will be offered on a cart that will move through the restaurant. Guests will be able to taste as many as six wines before selecting one or more to drink with their meal.

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Lunch service will be more conventional, Malouf said. "People will be able to come in and order a burger or salad — usually that's when people are on a schedule."

Malouf described the menu as Mediterranean-inspired, California cuisine "with international influences." Produce from the Copia gardens, managed by CIA Farm Manager Matthew Gunn will be utilized.

The remodel of the original Copia building by CIA and Architectural Resources Group has extended the facade nearly eight feet from its original location, allowing the dining room to blend with the property's patio, gardens and olive grove. The restaurant has one private dining room that seats 12, and two private dining rooms that each seat 18, but can be combined to seat 36.

A 1975 graduate of the CIA, Malouf joined the administration of his alma mater in 2013. Before that, he spent 13 years as co-owner and chief operating officer of Beacon Restaurant in New York City. Malouf is known in the New York area for his time as executive chef and director of operations at the Rainbow Room and executive chef at the Hudson River Club and Le Cremaillere.

The signature cuisine he developed at the Hudson River Club featured the culinary riches of the Hudson Valley, which resulted in "The Hudson River Valley Cookbook" (Addison-Wesley, 1996). Malouf is also the author of "High Heat: Grilling and Roasting Year-Round" (Random House/Broadway Books, 2005).

He co-founded the Windows of Hope Family Relief Fund after Sept. 11, 2001 and remains one of the organization's three directors. He is also a former chairman of the CIA's Alumni Council and served on the college's Education Committee.

Aken has worked as executive chef at Avia Napa (now Andaz) and was opening executive chef at AKA Bistro. The former owner of Toast Catering, executive chef and partner at Jack London Lodge and Stomp at the Mt. View Hotel. Originally from Southern California, Aken began his culinary career in Oklahoma City in 1995 under Chef Kurt Fleischfresser and also worked at La Folie in San Francisco.

### Event space

Other renovations at the new CIA include windows on the lower level opening out to the river, creating a light-filled, modern atrium in the center of the building that will be available for evening receptions and can accommodate 800 guests in a standing reception or a 350-seat dinner.

Upstairs, the former exhibit hall is being turned into a teaching kitchen for hands-on cooking classes. Bensele said the plan is to have it completed by late summer 2017.

A mezzanine overlooking the atrium and the Napa River can host an event for up to 300. Adjacent to the mezzanine are two classrooms that can be used for breakout sessions, each seating 30. Outside, the newly terraced amphitheater seats 600 in rows or 375 at tables.

Meeting spaces upstairs at CIA at Copia include the Food Business School classroom with 25 seats; the boardroom with 25 seats, reception space for 50 on the balcony and a garden balcony that will accommodate 80 seated and 120 standing.

The main theater at Copia, used for movie screenings, speakers' series, and panel presentations, seats 250.

For private event bookings, contact Amy Thomason-Richardson at 707-967-2307. For additional information, visit [www.ciaatcopia.com](http://www.ciaatcopia.com).

Food

## Napa's Copia to reopen as Culinary Institute of America campus

By Tara Duggan, San Francisco Chronicle | October 16, 2016 | Updated: October 16, 2016 5:00am

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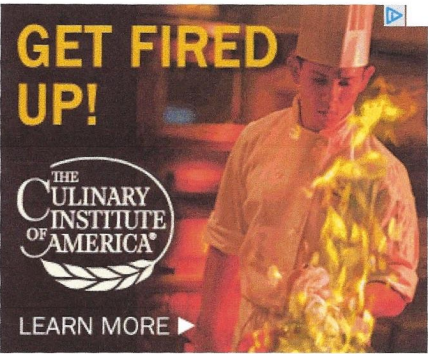
Photo: Talia Herman

The renovated restaurant at Copia in Napa, now part of the Culinary Institute of America.

Just after Halloween, Copia will rise from the dead in downtown Napa.



Drought-starved grapevines from its old garden have been pulled up and replaced by robust olive trees along the walk that leads to the former Copia: The American Center for Wine, Food and the Arts. The site will now be the CIA at Copia, a new public-facing campus for the Culinary Institute of America. When it opens in stages, starting in November, the CIA at Copia will have a renovated restaurant and store and will offer cooking demonstrations and wine tastings. Next year, it will open an exhibit space and offer hands-on cooking classes to nonprofessionals.



It's a big turnaround for the museum and event space, which first opened in 2001 with grandiose plans dreamed up by the late Robert and Margrit Mondavi, who were also major benefactors, and supporter Julia Child. But it closed and went into bankruptcy in 2008. Since then, its 80,000 square feet of exhibit halls, classrooms, theaters and a restaurant as well as an outdoor amphitheater have been largely empty.

The Culinary Institute of America, which is headquartered in Hyde Park, N.Y., and has had a branch at Greystone in St. Helena for 20 years, bought the property in October 2015 for \$12.5 million, a bargain compared to its original \$55 million price tag.

This will be the first branch of the institute that is oriented toward the public rather than professional cooks. Tom Bensel, managing director of the institute's California campuses, says it will increase the recreational cooking classes offered at St. Helena and move them to

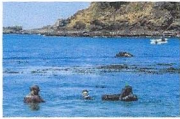
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**In California's abalone country, the hunt continues to evolve**

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Napa.

“We want to start being a leader in how people perceive food and health and sustainability,” says Bensel. “It’s a great platform for us to be able to speak to the public.”



Photo: Talia Herman

IMAGE 1 OF 9

The restaurant at the new CIA at Copia in Napa.

Based on experiences at its other campuses, including in San Antonio, Texas, and nine public restaurants and bakeries, the institute is betting its mix of tastings and classes will have more traction than what was offered at the original Copia.

“People want to taste things, touch things and have an experience,” Bensel says. “They’ll be



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able to immerse themselves with what's going on rather than just observe.”

Copia's original exhibits are gone, but the new space will house Chuck Williams' personal collection of cookware — bequeathed to the school when the founder of Williams-Sonoma died in December. When the exhibit opens in late spring or summer, entry will be free, and Bensel makes pains to say it won't be called a museum.

The new owners “have heard all of the horror stories about what occurred and what they can improve upon,” says Steve Carlin, who developed the Ferry Plaza Marketplace and the similar Oxbow Public Market, which opened in 2007, right next to Copia. “From what I've seen, they have listened to that and will make the appropriate adjustments.”

During the first phase next month, the institute will start to offer daily food and wine demo classes (\$25 to \$95) in a 75-seat theater. A bit later, six tasting stations will be set up in the atrium with visiting wineries that will rotate quarterly.

“This gives an opportunity to many wineries that don't have tasting rooms,” says Bensel. There are also plans for a high-end wine salon to be located next to the restaurant. It will offer small pours of cult wines that would otherwise be difficult to taste.

The restaurant, called the Restaurant at the CIA Copia, is inspired by the cart-style service at San Francisco's State Bird Provisions. Especially at dinner, the cooks will bring out trays with dishes that diners can choose from and are meant to be shared, such as a whole roast trout, duck and foie gras served with onion marmalade, and roasted oysters with shallots and verjus.

“We really want the restaurant to be fun and casual,” says Waldy Malouf, who heads up food and beverage operations at the institute.

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Photo: Talia Herman

A classroom kitchen in the new Culinary Institute of America campus at Copia in Napa.

While the restaurant at Copia will have a professional staff, the one at Greystone will be student-run, and closed when school is not in session.

Bensel says the new campus is part of the evolution of the culinary institute, from which he graduated in 1976. Back then, the culinary arts were considered more of a trade. Over the years the institute has gone beyond its associate degree programming to offer bachelor of arts degrees, and now a Wine and Beverage Graduate Certificate Program at Greystone.

The CIA at Copia also plans to be part of an ongoing evolution in downtown Napa. Copia closed during the Great Recession, and when a renovation to the nearby bypass channel was diverting traffic from the neighborhood. Things improved by 2010, developer Carlin says, and sales at Oxbow Public Market have since tripled. New hotels have opened, with additional ones due to open soon.

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At the original Copia, many say, another problem was a lack of involvement in the community.

“Whether it was intentional or not, there was a sense of exclusivity to it,” Bensel says. The CIA at Copia is trying to avoid that by hosting events and fundraisers, like one for Friends of the Napa Valley River that was held at its outdoor amphitheater last weekend.

If the new campus is successful, Bensel says, revenue will bolster its academic programming. And there’s one last side benefit to educating the public about food and wine: “Our graduates are going out and being part of successful restaurants,” he says. “We don’t want to just give them their certificates and be done.”

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**Tara Duggan**  
Food Reporter

## **COMMENTS OF RUSTY HINDS TO CULINARY INSTITUTE OF AMERICA CAMPUS MASTER PLAN**

### **Historical Review**

A review of the historical record of the establishment of the CIA Greystone Campus, and its resident housing chronology, is very important in setting the context of this current proposal being made by the CIA.

- 1993: Original Use Permit approves the construction of two residential dormitories and stipulates a third, with Permit amendment, to be constructed on the Greystone Campus. The CIA requested enrollment of 200 students but a maximum permit limit of 104 students was granted. The Permit required a 1:1 room to parking space ratio. The City Council certified a Final Environmental Impact Report.
- 2004: CIA is granted a Use Permit to transform the former Marlinda Nursing facility to student housing. This property is located at 830 Pratt Avenue, beyond the Urban Limit Line, and was zoned A-20. The Planning Commission and City Council approved the transition based solely on a non-conforming replaced by a use of lesser intensity (Occupancy reduced from 70 beds to 40).
- 2008: CIA requested a change in the Vineyard Lodge Use Permit to add a second dormitory. As this would trigger non-conformance of greater intensity in the A-20 zone, the Planning Commission and City Council struggled with the dilemma of either changing the citywide zoning ordinance for A-20 or the site specific rezoning of the Vineyard Lodge parcel. After much debate, the Vineyard Lodge parcel was rezoned Public Quasi Public. Vineyard Lodge II was erected and houses 60 residents in 12,612 square feet. The Vineyard Lodge total resident population is 101 served by 85 parking spaces. In addition, resolution 2008-74 increased the enrollment at the Greystone campus from 104 to 200 students.

### **Summary (Hinds)**

In review of the Initial Study/Mitigated Negative Declaration ("IS/MND"), and associated documents submitted by the Culinary Institute of America ("CIA") for the proposed expansion of the Vineyard Lodge located at 830 Pratt Avenue, several elements either require the granting of multiple variances to the City of St. Helena Municipal Code or they do not satisfactorily identify and mitigate all of the potentially significant impacts. My comments will focus primarily on the high intensity (massing and height) of the new buildings, their forward location on the site near Pratt Avenue (requiring a front setback variance), the inadequate number of parking spaces (requiring a variance), the potential increase in noise, the potential increase in traffic, the increase in wastewater generation, the potential increase in water usage above the allocated volumes and the significantly incongruous nature of the project with the surrounding agricultural and residential land use.

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As such, the City of St. Helena Planning Department, the Planning Commission and the City Council should deny the proposed expansion of the Vineyard Lodge property. The Applicant has less environmentally impactful alternatives to fulfill its requisite student housing needs at its Greystone Campus, and adjacent owned parcel, which date back to the original 1993 Use Permit.

### **INITIAL STUDY/MITIGATED NEGATIVE DECLARATION (Vineyard Lodge Expansion)**

In an effort to assist the reader, I have structured the following presentation of the analysis of the Initial Study/Mitigated Negative Declaration ("IS/MND") and Appendices in the following order:

- Cite the category of environmental factor potentially affected;
- Applicant's presentation of the Potentially Significant Impact, either properly identified, or improperly characterized as Less than Significant;
- Presentation of the Applicant's Impact Analysis, as presented;
- Presentation of the Applicant's proposed Mitigation Measure(s) associated with the environmental factor;
- Presentation of Hinds' rebuttal of the manner in which the Applicant has failed to either properly characterize or mitigate each of the environmental factors which create a Potentially Significant Impact; and
- Page numbers are listed parenthetically to assist the reader in reference to where each issue is found in the IS/MND.

#### **Aesthetics:**

##### **Potentially Significant Impacts (IS/MND Page 12)**

- Substantial adverse effect on a scenic vista
- Substantially degrade the existing visual character or quality of the site and its surroundings

##### **Impact Analysis (IS/MND Pages 13-15)**

- Residents and other viewer groups may experience reduced visual quality
- New dorms maximum height of 40'-2"
- Project will introduce perimeter parking lot lighting

##### **Mitigation Measure AES-1 (IS/MND Page 15)**

- Landscaping Plan - Vegetative screening (Trees). To be approved by Planning and Community Director prior to issuance of Building Permit

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**The Applicant has failed to adequately mitigate the impacts for Aesthetics for the following reasons:**

- High intensity massing (40,645 sq. ft.) and location of new buildings too close to Pratt Avenue;
- Maximum height of proposed buildings (36'-40'). Surrounding land use (A-20, greater than two acres has a maximum height limitation of 30'. Municipal Code 17.20.060);
- Visual Site Assessment performed in Summer 2016, during the period when onsite trees had full foliage;
- American Sycamore trees located on the northeastern property line along, "Vineyard Road, provide no screening in Fall and Winter months. Also, this same stand of trees will not provide adequate year-round height to screen the tops of proposed Buildings A and C (40');
- No existing screening on the eastern portion of the front property line on Pratt Ave. where proposed Building B (height 36') will be located;
- Existing trees on the western portion of the front property line on Pratt Ave. will not provide adequate screening of proposed Building B (36');
- Lack of trees to properly screen height of proposed Building C (40') looking eastward from western site boundary;
- The Applicant's Landscaping Plan (AES-1) does not mitigate the aesthetic impact resulting from the proposed project. Due to the large size of the buildings, mitigation cannot be accomplished by landscaping. Even with the addition of the landscaping proposed by the Applicant, the permanent visual impact of these buildings will be very significant and will detract from the beauty of the surrounding vineyard/mountain vistas;
- The Traffic Impact Report for the Vineyard Lodge driveway specifically contradicts the Applicant's landscaping plan by stating, "Therefore, sight lines would be acceptable assuming that no landscaping is planted along the site frontage that would ultimately grow and block driver views."
- This mitigation measure is not adequate for the proposed project and, with all due respect, should not be determined at the sole discretion of the Planning and Community Director, as proposed by the Applicant.

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**Land Use and Planning****Potentially Significant Impacts (IS/MND Page 38)**

- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

**Setting and Impact Analysis (IS/MND Pages 38-40)**

- The outer edge of the urban service area is demarcated by the urban limit line ("ULL") which is a parcel specific boundary that marks the limit of allowed urban development. The intent of the ULL is to discourage urban sprawl and promote sensitive development which preserves the rural and agricultural lands around the City. The proposed project is subject to land use policies outlined in the St. Helena General Plan (Guiding Policy 2.6.5 encourages the continuation of agricultural and **low-intensity** uses adjacent to the Urban Limit Line);
- The Vineyard Lodge Housing Site is located outside and adjacent to the ULL and is zoned Public Quasi Public ("PQP");
- The project is subject to other standard requirements, stipulated by the Zoning Code, namely, parking and setback requirements which, given site constraints, the applicant maintains cannot be met;
- Under Municipal Code 17.112.050, the Vineyard Lodge Housing site is subject to a special setback requirement of 36';
- In addition, the project has requested a variance from the parking standards outlined in Municipal Code Section 7.124.30 (A.3) which require two spaces for the resident owner and one space for each guest bed. Compliance with the Code will require 226 total parking spaces. Based on data supplied by the applicant, only 31% of students have a demand for parking spaces. As such, applicant is requesting a variance to allow for 72 parking spaces. To ensure that the number of available parking spaces equates with demand, applicant will cap the number of parking permits at 72 and will prohibit overnight offsite and street parking.

**Mitigation Measure LU-1 (IS/MND Page 40)**

- Requires at least five (5) on demand bicycles be made available to residents of the Vineyard Lodge Housing Site.

**The Applicant has failed to adequately identify and mitigate the impacts for Land Use and Planning for the following reasons:**

- Pursuant to Section 17.112.500.A of the St. Helena Municipal Code, there is a special setback of 36' on the northwest side of Pratt Avenue, from the railroad track to the Napa River. The reason this provision was included in the zoning code is evidenced by Section 5.3.3 of the Transportation Element of the 1993 General Plan (St. Helena's current

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governing General Plan) which provides, "Guiding Policies 5.3.3 Preserve rights-of-way for future collector streets within the planning area. The intent of the right-of-way preservation designation is to clearly define the interest of the City in maintaining the option for extending its collector street system into these areas. Special setback areas shall be established along collector streets to allow for future widening." In summary, the special setback on Pratt Avenue was established pursuant to the 1993 General Plan to allow for future widening due to Pratt Avenue being designated as a collector street. A variance to this special setback would be in direct contradiction of the General Plan and Zoning Code and would result in the loss of ability to widen Pratt Avenue in the future;

- The high intensity of the proposed Vineyard Lodge project (massing, height and building location near Pratt Avenue) is not consistent with the surrounding agricultural and residential land use (Municipal Code 17.168.050 G)(Municipal Code 17.164.030 A 3,5 and 8), the sensitive, low intensity development on parcels beyond the ULL (General Plan Guiding Policy 2.6.5) and the adjacent land use (A-20, greater than two acres) which mandates a maximum building height of 30 feet (Municipal Code 17.20.060);
- Applicant has not provided data demonstrating a strict 31% demand for onsite parking at the Vineyard Lodge Housing Site. The May 12, 2016, Vineyard Lodge Traffic Study (Dated November 2, 2016), references 96 student residents and 42 cars in the parking lot at the Vineyard Lodge (Demand ratio of 44%). The Greystone May 2016 traffic study (Table 7, Footnote 1, report dated November 17, 2016), references 45 students residing in the Greystone dormitory and parking demand is 70%. The Applicant's submitted documents clearly identify a significant parking demand discrepancy between student residents at the Vineyard Lodge (theoretical 31%, actual 44%) and Greystone (70%). The Applicant's requested parking variance should be denied and the required 1:1 ratio of beds to parking spaces should be required at the Vineyard Lodge;
- If Applicant wants to expand enrollment from 200 to 300 students, the Greystone and other Applicant owned sites should be evaluated to fulfill additional requisite housing and parking capacity requirements;
- The 1993 Use Permit (Resolution 93-105) approved the construction of two dormitories and allowed for a third dormitory, with Use Permit Amendment, on the Greystone Campus. "The CIA was previously approved to build two additional dormitories on the slope behind Greystone. The permits for those structures were not vested and have since lapsed." (Public Hearing Staff Report, August 28, 2008), This building site option remains as a viable alternative without the cumulative impacts of the Vineyard Lodge expansion project;
- The Greystone Campus has space to facilitate resident housing expansion, will eliminate the need for additional shuttle bus trips from the Vineyard Lodge and will not result in additional visual impact;



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- The Vineyard Lodge site is too small to expand the housing capacity from its current 101 to the proposed 224 student residents while maintaining compliance with the Municipal Code and General Plan of St. Helena. The Vineyard Lodge site is fully developed in its present state.

**Noise:****Potentially Significant Impact (Categorized Less than Significant, IS/MND Page 41)**

- A substantial permanent increase in ambient noise levels in the project vicinity above existing without the project.

**Setting/Impact Analysis (IS/MND Pages 42-44)**

- Noise study conducted on June 15, 2016. The existing housing facilities were not occupied as students were on break. The measured noise levels represent the lowest noise levels likely to be encountered in the area. Overall, the noise measurements indicate that the noise environment in the project area is generally quiet and consistent with the rural setting.
- At project operation, the onsite land use at the Vineyard Lodge, and associated noise environment, will continue to be typical of a multi-unit development (dormitories).
- The expansion of the Vineyard Lodge site is not expected to introduce a substantial permanent increase in the ambient noise environment.
- Gatherings could include up to 120 students who would live on the site.
- In addition, the CIA regulates activities at the Vineyard Lodge to prohibit amplified music outside, enforces a 9:30 p.m. noise curfew and prohibits non-residents from attending events on the quad.
- Student activities are not expected to result in noise that can be heard at the property line between the hours of 10:00 p.m. and 7:00 a.m.

**Mitigation Measure (Not Offered by Applicant)**

- Permanent noise was subjectively categorized as Less than Significant, therefore, no mitigation measure was offered.

**The Applicant has failed to identify and adequately mitigate the impacts for Noise for the following reasons:**

- The Noise Study was actually conducted in April-May 2016 while there were no students onsite at the Vineyard Lodge. As such, the results of the noise study are inaccurate since actual onsite student noise contribution was not measured and not considered for mitigation;

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- Key findings of the study were not predicated on the proposed 224 students residing at the Vineyard Lodge. The IS/MND states, "Gatherings could include up to 120 students that live onsite." Does this set a maximum outdoor activity limit of 120 students that live onsite? What about participation by the other 104 student residents?
- What is the compliance history of the CIA noise regulations including no amplified outdoor music, 9:30 p.m. curfew and prohibition of non-resident attendance? The CIA should be specific as to what means and by whom are these prohibitions enforced. The CIA should state the policy for violating any of these stated prohibitions.
- The Applicant should be required to address the increase in traffic noise resulting from the increase in number of permitted student cars from the reportedly 31 to 72?
- Applicant's statement, "Student activities are not expected to result in noise that can be heard at the property line between the hours of 10:00 p.m. and 7:00 a.m." is simply not believable. The proposed expanded Vineyard Lodge is a multi-unit college dormitory that will house 224 students with all parking located on the perimeter of the site. College students keep late hours and are typically loud.
- The Noise Study did not contemplate the effect of noise emanating from the Vineyard Lodge toward the two residential building sites located directly across Pratt Ave.

**Population and Housing:****Potentially Significant Impacts (Categorized Less than Significant, IS/MND Page 45)**

- Induced substantial population growth in an area.

**Impact Analysis (IS/MND Page 45)**

- Project construction activities at the Vineyard Lodge Housing site would result in a maximum occupancy of 224 students onsite, which equates to a net increase of 123 students.

**Mitigation Measure (Not Offered by Applicant)**

- Population Growth was subjectively categorized as Less than Significant, therefore, no mitigation measure was offered.

**The Applicant has failed to adequately identify and mitigate the impacts for Population and Housing for the following reasons:**

- The increase in resident student population from 101 to 224 is concentrating 123 additional students at the project site.

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- Notwithstanding the PQP zoning of the site, this significant increase in residential density is not consistent with the surrounding agricultural land use and scenic surroundings (Municipal Code 17.168.050 G)(Municipal Code 17.164.030 A 3,5 and 8) and is in conflict with the General Plan guiding principle (2.6.5) of sensitive development on parcels located beyond the ULL.

**Transportation/Traffic:****Potentially Significant Impacts (IS/MND Page 48)**

- Conflict with applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths and mass transit?

**Impact Analysis (IS/MND Page 50)**

- With the project, the intersection of Pratt Ave/SR HWY 29 WB will operate unacceptably under Level of Service "F" during the AM and PM peak hours.

**Mitigation Measure (IS/MND Page 50 , Trip Capacity - Not formal Mitigation Measure)**

- The CIA is proposing to increase the capacity of its three shuttle buses that transport students from the Vineyard Lodge to Greystone.

**The Applicant has failed to adequately identify and mitigate the impacts for Transportation/Traffic for the following reasons:**

- The Traffic Impact Report ("TIR") only considers peak A.M. and P.M. shuttle bus trips from Vineyard Lodge to Greystone. The TIR fails to consider the full magnitude of personal trip usage of the 72 permitted cars located at Vineyard Lodge;
- The TIR incorporates a theoretical estimate of the traffic contribution from the Las Alcobas Hotel driveway, which is located at the intersection of Pratt Avenue/HWY 29. The TIR may prove to be inaccurate when the actual traffic impacts resulting from the Las Alcobas Hotel begins operating at full capacity (Sometime after its opening in 2017). Since the Las Alcobas Hotel is a large project (68 guest rooms plus a restaurant serving the general public), with potentially significant impacts in the same area as the proposed project and the proposed Beringer projects, it would be prudent to deny the proposed Vineyard Lodge expansion project until the actual full traffic impacts can be further determined.

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**Utilities/Public Services:****Potentially Significant Impacts (All categorized as Less than Significant, IS/MND Page 55)****Impact Analysis (IS/MND Page 56-57)**

- (Wastewater Treatment). At the Vineyard Lodge Housing Site, the sanitary sewer management system will accommodate a peak daily flow of approximately 9520 gpd which equates to a projected net increase of 1960 gpd over existing capacity (flow);
- (Sufficient Water Supplies). The total water allotment across the two sites amounts to an average of 20,650 gpd. The Applicant proposes to rescind the two separate agreements and adopt a new joint water agreement which would redistribute the gross water allotment across the two sites to accommodate the increase in housing at the Vineyard Lodge site.

**Mitigation Measure (None offered)**

- Utilities/Public Services was subjectively categorized as Less than Significant, therefore, no mitigation measures was offered.

**The Applicant has failed to adequately identify and mitigate the potential impacts for Utilities/Public Service for the following reasons:**

- The Wastewater Feasibility Analysis for the expanded Vineyard Lodge housing reports the anticipated peak daily flow of approximately 9520 gpd. The current average recorded flow is 6373 gpd. The actual increase in average daily flow from the expanded Vineyard Lodge will be a minimum of 3147 gpd (an increase of 49%, rather than the 1960 gpd cited above in the Impact Analysis);
- Additionally, the onsite equalization pump tank is sufficiently sized to allow for only off-peak discharge to the City sewer;
- Odor Control. The Wastewater Feasibility Study for the Vineyard Lodge references, "There should be no noxious odors from a properly designed and operated treatment system. See Alternative Courses of Action for operation alternatives." No odor control mitigation is listed under Alternative Courses of Action;
- The Water Availability Analysis - Greystone and Vineyard Lodge reports data records which reflect the Baseline Existing Demand of 23,478 gpd, which is well above the current allotment of 20,650 gpd;
- The Proposed Water Use Demand is expected to be 21,667 gpd (Annual use adjusted to 19,796 gpd.) These are theoretical calculations and actual water demand could continue to exceed water allotment volumes.

## Public Comment 16

**Mandatory Findings of Significance:**

(Degrade the Environment) Less than Significant (IS/MND Page 56)

(Cumulatively Affect the Environment) Less than Significant (IS/MND Page 56)

**The Applicant has failed to adequately identify the Mandatory Findings of Significance for the following reasons:**

As presented in this paper, the Applicant has failed to thoroughly analyze each of the environmental factors that are potentially affected. Many of the technical studies, which are the basis of the Applicant's subjective findings, are "nuanced" on a conditional set of variables, or factors, rather than evaluating the potential impact in its entirety. Contradictions in conclusions between the Applicant's technical reports have been brought forth to reflect the effect each has on the degree of significance of impact. As a result, the impact is either not mitigated or the mitigation measure offered is ineffective.

The Applicant's Initial Study/Mitigated Negative Declaration does not properly identify nor mitigate all of the Potentially Significant Impacts to the environment. Pursuant to CEQA Section 21082.2.d. "If there is substantial evidence, in light of the whole record before the lead agency, that a project may have a significant effect on the environment, an environmental impact report shall be prepared." In the event the Planning Commission and City Council find that the project does not fail on the criteria of Design Review or Use Permit findings, the Applicant should be required to perform an EIR to fully delineate the Potentially Significant Impacts to the environment.

Public Comment 17

**From:** bertz345@aol.com  
**To:** [Lilly Bianco](#)  
**Subject:** PRATT AVENUE CIA DORMS  
**Date:** Wednesday, February 15, 2017 3:55:36 PM

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My name is Linda Bertoli I have lived on Pratt Avenue for forty years. I see the CIA plans to expand. their facility on Pratt. I am not for this . For years the community has been asked to cut back on their water usage. We all try and do the best we can. We are a community and appreciate living here. We are friends and neighbors.

It is my understanding the CIA want to double the size of the existing dorms with 3 new multi-story buildings. With an increase of over 120 students, they will probably want sinks, toilets, showers and probably clean linens . I wonder if they would be sensitive to our constant water shortage . They would be strangers in our community. Pratt is a country lane with no side walks. There was an accident in front of our house killing 4.

Every day I drive to town I see worke'rs cars ( probably 40 or more) working on the hotel at Main and Pratt. I am sure no one knows the impact of that hotel. ( the corner of Pratt and Main) Then we will have several more years or worker's cars. I wonder how many of these workers are even from Napa County .

I wonder, also, who are these students? are they taking a year-long class or a couple from the east taking a 2-week class in egg whites and visiting the Napa Valley ( staying in the dorms with no hotel tax)

Do we have to say "yes " to every one who shows up with a wad of cash? Is there room on our roads for a couple hundred more cars?

So if anyone wants to know ..... I am against this CIA dorm expansion... Linda Bertoli 345 Pratt Ave.  
 963-2293 2/15/2017

Public Comment 18

**From:** Lars Kronmark  
**To:** [Lilly Bianco](#)  
**Subject:** lars and a note about Pratt and CIA  
**Date:** Wednesday, February 15, 2017 5:18:46 PM

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Attn: Mayor Alan Galbraith, Grace Kistner, Chairperson, Bobbi Monnette, Commissioner, Sarah Parker, Commissioner,  
 Tracy Sweeney, Commissioner; Noah Housh, Planning & Community Improvement Director, Lilly Bianco, Contract Planner

In 1995, I had the pleasure of being part of the Opening Team for the Culinary Institute's Greystone Campus. In 2000, I moved to St Helena with my family where we now have our roots and a son who just graduated from the High School. I am a Faculty Member at the C.I.A. and am involved in our town as much as my time allows. For example, I am a long serving Board Member of the St. Helena Farmers' Market.

I am writing this letter in support of the expansion and beautification of the C.I.A's Student Housing on Pratt Avenue that will be discussed at the Planning Commission's Meeting next Tuesday.

Our students are committed to being positive and well behaved residents of St. Helena. Wherever I go in St Helena, I see them walking, biking and shopping with lots of energy and acting in a professional manner. I think we are very fortunate to have this "younger age group" in the valley at a time when 1) many of our towns are inhabited with an aging population and 2) an increasing number of homes have become second homes owned by people who only only spend a few months of the year in the valley.

In addition, the students take great pride in responding to the many requests for assistance at fundraising events from local Non-Profit Organizations such as the Cameo Cinema, the Fire Department, the Farmers' Market and many many more.

I hope you will agree that we are very fortunate to have this energetic and professional support in our town..

I am asking for your kind assistance in approving the proposed plans for the expansion and beautification of the Student Housing at Pratt Avenue - for today's students and those in the future.

I thank you for your consideration.

Best regards

Lars Kronmark

Lars Kronmark

Professor CWP

Culinary Institute of America at Greystone

Public Comment 18

2555 Main Street

St Helena CA 94574

Home Address

1665 Voorhees Circle

St Helena CA 94574

Lars Kronmark

Chef Instructor

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**CITY OF ST. HELENA  
PLANNING DEPARTMENT 1480 MAIN STREET- ST. HELENA, CA 94574  
PLANNING COMMISSION**

**February 21, 2017**

**AGENDA ITEM:** #

**FILE NUMBER:** PL16-043

**SUBJECT:** *Culinary Institute of America (CIA) Campus Master Plan (Part 2 of 2)*  
Vineyard Lodge Demolition permit, Design Review, Use Permit, and  
Variance

**PREPARED BY:** Lilly Bianco, Contract Planner

**REVIEWED BY:** Noah Housh, Planning Director

**APPLICATION FILED:** 06.27.16      **ACCEPTED AS COMPLETE:** 10.05.16

**LOCATION OF PROPERTY:** 830 Pratt Avenue

**APPLICANT:** Thomas Bensel, Managing Director of the Culinary Institute of America  
(CIA)

**PHONE:** 1(707) 967-2310

**APN:** 009-010-024

**GENERAL PLAN:** Agriculture

**ZONING:** Public- Quasi-Public

**PROPERTY DESCRIPTION:** The Vineyard Lodge Housing site at 830 Pratt Avenue (APN 009-010-024) is located in the middle of the valley floor and on the north side of Pratt Avenue; approximately one-quarter mile from Main Street (SR 29). The site features a 2.61-acre triangular shaped lot located on the north side of Pratt Avenue, adjacent to the Napa Valley railroad right-of-way (ROW), and west of Vineyard Rd; beyond which the site is bounded by vineyard and agricultural uses, including the Beringer wastewater treatment pond directly to the east of the site.

Historically, the site served agricultural purposes, but was developed with a convalescent home in the 1960s. Since 2004, it has served as student housing for CIA students. At present, the site is relatively flat and is partially developed with a one story dormitory building at the southwest corner of the property and a two-story dormitory building (C.2008) in the middle one third; the northernmost corner remains unimproved.

CIA Campus Master Plan  
2555 Main Street and 830 Pratt Avenue  
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**PROJECT BACKGROUND**

In 2004, the City issued a use permit authorizing the Culinary Institute of America (CIA) to convert the former Marlinda Convalescent Home at 830 Pratt Avenue to CIA student housing per Resolution No.2004-33. The City approved amendments to the permit which authorized construction of Vineyard Lodge II in 2008 per Resolution No. 2008-75. At present, the use permit authorizes Vineyard Lodge 1 and Vineyard Lodge II and a total of 71 rooms (101 beds). The site is supported by 85 parking spaces.

**HISTORY OF ACTIONS**

|                    |                                                                                  |
|--------------------|----------------------------------------------------------------------------------|
| RESOLUTION 2004-33 | Approved conversion of Marlinda Convalescent home to student housing for the CIA |
| RESOLUTION 2008-75 | Approved expansion of student housing and construction of Vineyard Lodge II      |

*For a comprehensive list of past entitlements issued to the Culinary Institute of America Vineyard Lodge site see **Attachment 2**.*

**Preliminary Project Review**

**March 2016:** In March 2016 the City Council held a study session which involved a presentation by the CIA of their conceptual Master Plan and included a proposal to introduce four new buildings at the Vineyard lodge site (135 new beds) and perform an interior remodel/reconfiguration at the Greystone property. Concerns voiced at the Study Session were limited and generally centered around water use, wastewater capacity, and how the CIA’s relationship with the City may evolve. There were no specific objections to the proposal voiced at the study session.

**April 2016:** In April of 2016, the applicant held a neighborhood meeting to obtain community input on the proposed project. At the neighborhood meeting concerns centered around the proposed scale and massing, visual prominence, and noise impacts of the proposed project. To address concerns voiced at the meeting, the applicant refined the project prior to submitting to the City; refinements included increasing the setback, adjusting massing, and introducing a central courtyard, amongst other things. For a more detailed discussion of the preliminary revisions see “Design Review” discussion, below.

**PROJECT DESCRIPTION**

As currently proposed, the project includes the expansion of housing facilities (dormitories) at the Vineyard Lodge Housing Site (830 Pratt Avenue) and appurtenant to the educational facility at Greystone to accommodate a total of 224 students. To achieve this, the applicant is proposing to demolish the existing Vineyard Lodge I (41 beds) and construct three new dormitories ranging in size from 11,380 sf to 17,885 sf and ranging in height from 29’ to approximately 40’. This would result in a net increase of 123 new beds. The site would feature 72 parking spaces (69 designated spaces and 3 on-demand rental car spaces) and a central courtyard. Shuttles with capacity of 14,

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22 and 32 seats would provide transportation between the Greystone campus and the Vineyard Lodge Housing facility. The applicant is further requesting variances to allow for a lesser setback from Pratt Avenue as required under Municipal Code Section 17.112.050 and a variance to allow reduced number of parking spaces as required under Municipal Code Chapter 17.124

#### Site Plan

The proposed site plan features three (3) new buildings, denoted as Building A, B, and C, in addition to Vineyard Lodge II:

Building A: 17, 885 SF (39 rooms; 70 beds)  
 Building B: 11,380 SF (52 rooms; 52 beds)  
Building C: 11,380 SF (42 rooms; 42 beds )  
 Total: 40,645 SF (133 rooms;164 beds)

Building A forms an L-Shape along Vineyard Road and is comprised of two distinct wings that connect via second-story “connector porch” — note that there is a discrepancy on the plan set such that this connection is not readily shown on civil plans, but is clearly visible on architectural plans (pages A001- A103). Building B would extend along site frontage and building C would be oriented along the western site boundary. The three new buildings would be clustered toward the front of the site and oriented around a central courtyard. The buildings would be setback from the Pratt Avenue property line at a minimum of 20’. Vineyard Lodge II would be located behind the new buildings, but visually connected by the introduction of a pedestrian plaza in between the existing building and proposed new construction. Vineyard Lodge II is 12,612 SF and provides 60 beds. Taken together, the existing *plus* proposed development would provide housing for 224 students, which equates to a net increase of 123 students living on-site. A total of 72 parking spaces are proposed to support the student housing use and would be distributed around the periphery of the site. A 16’ wide internal access road would extend from Vineyard Road through the site to Pratt Avenue. An access agreement/easement with Beringer Vineyards has been negotiated to allow for the use of Vineyard Road as needed to access the subject site.

#### Visual Character

The project site is situated at the northern border of St Helena’s urban limits where medium density residential development is bordered by agricultural land uses immediately to the north and east. The existing visual character of the project area is therefore comprised of both residential scale single-family residences (south and west) and agricultural uses including processing and storage (north, east, and west).

The site design features multiple buildings of varying height. The proposed buildings will be contemporary in style, but feature craftsman-like details including wood columns and brackets. The building will be supported by an exposed, parge coated<sup>1</sup> foundation. Exterior walls would be clad in a combination of painted cementitious or poly ash clapboard siding and stained red cedar siding and punctuated with wood clad windows. The building would feature an irregular, multi-gabled roof with asphalt shingles. The

<sup>1</sup> Parge coat refers to a thin coat of a cementitious or polymeric mortar applied to concrete or masonry in order to refine the surface.

proposed color palette includes neutral hues like brown, natural wood, and green. Below is a table from the Visual Impact Assessment detailing the plan, height, and setback of the proposed buildings.

|                   | <i>Building Description</i>      | <i>Bldg. Height</i>                               | <i>Setback from street</i>                                                     |
|-------------------|----------------------------------|---------------------------------------------------|--------------------------------------------------------------------------------|
| Vineyard Lodge II | Existing                         | 32'                                               | Not provided.                                                                  |
| Building A        | 2 stories<br>3 stories @ rear    | 29'2" @ vineyard Road<br>40'2" at 3 story portion | 20' from Pratt Ave Property line                                               |
| Building B        | 2 stories<br>Rectangular plan    | 29'2"                                             | 20' from Pratt Avenue Property Line<br>50' from Centerline of Pratt Avenue ROW |
| Building C        | 3 stories<br>Rectangular in plan | 40'2"                                             | 145' from Pratt Avenue property line<br>175' from centerline of Pratt Ave ROW  |

#### Parking and Access

Primary site access would be provided via Vineyard Road, which runs along the eastern property line. A total of three access points would be located along Vineyard Road and would provide access to onsite parking areas. A 16' one way drive lane would extend from Vineyard Road, between Vineyard Lodge II and the proposed new buildings, to exit onto Pratt Avenue, thereby providing through-access from Vineyard Road to Pratt Avenue.

The Vineyard Lodge Housing site would feature a total of 72 parking spaces, 69 of which would be designated spaces for permitted vehicles and the remaining 3 would provide parking for the three on-demand rental cars. All of the 69 parking spaces would be by permit only, as required by Use Permit condition of approval (COA) number 21. Further, Mitigation Measure LU-1 imposed on the project requires that the applicant provide at least five (5) on-demand bicycles in order to further reduce reliance on vehicles and limit demand on parking spaces. These requirements are in addition to the maintenance of shuttle service at regular 15-minute intervals between the CIA dormitory property and the Greystone campus which will be detailed in the Transportation Plan, required by Condition of Approval No. 20

#### Trash Enclosures

The trash enclosure presently located in the northeast portion of the site along Vineyard Road frontage will be relocated to the southwest portion of the site adjacent to the internal access drive. Per condition of approval, the trash enclosure(s) will be constructed of opaque materials and be of sufficient size to permit the storage, removal and replacement of standard commercial size trash bins. No collection, storage or stacking of garbage, trash and refuse is permitted outside the trash enclosure.

#### Landscaping

The applicant is proposing a combination of trees, shrubs and sod. To accommodate the proposed development the applicant will remove 21 trees and transplant 23 trees. Two trees proposed for removal include two (2) coast live oaks. Per Mitigation Measure

BIO-1, removed trees will be replaced at a 3:1 ratio either at the Vineyard Lodge Site or Greystone site. Established Camphors located along the property frontage will be retained to provide continued shade and screening.

#### Operation

Operations of the site and its relationship to the Greystone campus will not change. Shuttle service will continue to be provided at regular intervals (every 15 minutes from approximately 6:45 a.m. to 9:00 p.m.). To accommodate the increase in students living at the Vineyard Lodge site, the Applicant will begin using a 32 seat shuttle as needed, currently a 14 and 22 seat shuttle is used; but no change in the frequency of trips is anticipated.

#### Off-site Improvements

Off-site improvements include standard roadway improvements at property frontage which will include a full width grind and asphalt overlay (0.10'), re-striping for the installation of a bike lane (in the westbound direction), centerline, and fog line (in the eastbound direction) of Pratt Avenue. Per mitigation imposed on the project as part of the MND and to ensure consistency with land use policies, the project's off-site improvements would be expanded to introduce a Class II bike lane along westbound Pratt, for the segment located between the project site and the Pratt Avenue/Highway 29 intersection (approximately 1500 feet) and a fog line for the same segment in the eastbound direction.

### **ANALYSIS**

#### **GENERAL PLAN**

The Vineyard Lodge Housing Site exhibits a General Plan Land Use Designation of Agriculture. The AG designation provides for agricultural uses, wineries, single-family residences, and public and quasi-public uses, like that of the project. The AG designation is applied to extensive areas of the valley floor that surround the urban core area. With the exception of those hillside areas designated WW, all lands outside the Urban Limit Line are designated AG regardless of their size or actual use.

General Plan policies applicable to the Vineyard Lodge Housing Component of the CIA Campus Master Plan include:

- 4.3.4** Strengthen community identity by appropriate building design, size, and site landscaping.
- 2.6.2** New development should be required to occur in a logical and orderly manner within well-defined boundaries, and be consistent with the ability to provide urban services.
- 2.6.4** Permit infill development and higher densities within currently developed areas wherever possible to minimize and postpone the need for expansion of the Urban Service Area.

**2.6.5** Encourage the continuation of agricultural and low-intensity uses adjacent to the Urban Limit Line.

**HE1.5** Encourage innovative housing types and designs.

**HE2.1** Encourage higher density development where appropriate.

**HE2.2** Ensure that higher density housing opportunity sites are not lost to lower density uses.

**HE2.6** Promote a balance of types of housing throughout the whole community.

#### Staff finding

According to the General Plan Guidelines published by the State Office of Planning and Research, “An action, program, or project is consistent with the General Plan if, considering all its aspects; it will further the objectives and policies of the General Plan and not obstruct their attainment.” As proposed, the project would serve as infill development on an existing site and proximate to the urban service area and which would not encroach into or otherwise hinder agricultural activities such that it would be consistent with GP policies, 2.6.2, 2.6.4, and 2.6.5, and named above. The project is further consistent with Housing Element goals, HE1.5, HE2.1, HE2.2 and HE2.6 in that the proposed dormitory expansion would promote a balance of housing types within St. Helena and serve as a reasonable solution to provide housing to an expanding student body when the availability and affordability of traditional housing options (single family homes, apartments, etc.) is seriously limited. The expansion of student housing on the site would not constitute a significant departure from the existing visual environment in that the site is already developed with student housing and substantially covered in hardscape. The proposed design, site configuration, and level of landscaping make an effort to balance functionality with aesthetic concerns and therefore appear generally consistent with GP Goal 4.3.4. Acknowledging the above, staff finds that the subject project is found to be consistent with applicable General Plan policies and objectives, and would not conflict with or otherwise obstruct the attainment of any General Plan goals, policies, or objectives.

#### **ZONING**

Consistent with the Agricultural Land Use Designation, the site exhibits a zoning designation of PQP:Public; Quasi-Public. It is the purpose of the PQP public and quasi-public district to provide for government-owned facilities, public and private schools and quasi-public uses such as churches and cemeteries. Due to the wide variety of possible public and quasi-public uses and legal relationships involved it is not possible to fully implement a traditional list of uses with fixed development standards. As such, all uses within the PQP Zoning District are subject to a use permit approval with the determination of appropriate development standards (e.g. setbacks, height, etc.,) being deferred to the Planning Commission.

#### Parking

For parking requirements, the Public and Quasi-Public Zoning standards defer to those standards outlined in Chapter 17.124. Historically, the City has applied the parking

standards for “rooming, boarding or lodging house” to the subject site. The code section stipulates that “rooming, boarding or lodging houses” shall provide two (2) spaces for the resident owner plus one (1) space for each guest room, meaning that the project should include a total of 175 parking spaces to accommodate the 173 rooms, plus two spaces for on-site manager(s). Note that the applicant’s narrative and the IS/MND had interpreted this provision to relate to number of beds (not rooms) which was incorrect; this has been corrected in the final IS/MND and as denoted in Section 3 of the Response to Comments. At present, the applicant proposes a total of 72 parking spaces (69 designated spaces and 3 spaces for on-demand rental cars). Given that the parking demand has historically only necessitated spaces for 31 percent of students (based on the experience of the CIA in operating the existing dormitory), the applicant is proposing to include parking commensurate with that historical demand. As the proposed parking deviates from that explicitly authorized for “rooming, boarding, or lodging houses”, the applicant is requesting a variance, described in more detailed on page 21.

In addition, Municipal Code Section 17.124.030(H) provides for “unlisted uses,” and authorizes the Planning Commission to determine the parking requirements for uses which are not specifically addressed by this Code section. It directs the Commission to consider the requirements outlined in Section 17.124.030 as a frame of reference when making a determination. Given that the dormitory use is unique in its operation and given that it will provide alternative forms of transportation, the Planning Commission may wish to make findings under Code Section 17.124.030(H), as a means to determine the appropriate level of parking.

The Municipal Code defines a “lodging house” as a building, or portion thereof, other than a hotel, motel, or bed and breakfast inn, providing room and board or rooming only for compensation. Most often, this is understood as a house having furnished rooms for rent to lodgers. However, unlike a lodging house, the Vineyard Lodge site provides housing *and* transportation for a very specific type of tenant and has much more control over the activities of said tenants. The dormitory-use, established shuttle program, and provision of on-demand rental cars and bicycles, are such that the Vineyard Lodge Housing site operation would be distinctly different from that exhibited by a typical rooming/boarding or lodging house and therefore, the Commission may want to also rely on Code Section 17.124.030(H) to determine an appropriate level of parking for the Vineyard Lodge Dormitories and to account for the uniqueness of this particular use.

To determine minimum parking standards for unlisted used and under Municipal Code Section 17.124.030, the Planning Commission may use Section 17.124.030 as a general rule and guide, while also accounting for the particularities of the specific project.

#### Setback

While the PQP District does not prescribe specific setbacks, Pratt Avenue is subject to “special setback requirements” prescribed under Municipal Code Section 17.112.050. According to the Code, properties located along the northwesterly side of Pratt between the Southern Pacific railroad tracks to the Napa River and are subject to a 36’ setback. However, given site constraints, the applicant is proposing a setback of 20’.

Given the proposed deviation, the applicant is asking for a variance as detailed on page 18.

Other development characteristics not explicitly addressed in the Zoning Code

As detailed above, the Zoning Code does not specify minimum or maximums related to the following development components. Rather, it is at the discretion of the Planning Commission that the following development components be found appropriate for the design and function of the site. As such, the specifics below are provided for informational purposes and may be considered as part of the use permit process.

**Height:** 29'2" to 40'2"

**Lot Coverage:**  $24,356 / 128,502 = 18.95\%$  (inclusive of VL2)

**Floor Area Ratio:**  $40.645 / 128,502 = 0.316$  (inclusive of VL2)

**Front Setback:** 20 feet

**Side Setback (Vineyard Rd):** 13'

**Rear Setback (RR):** 54'

Based on the discretion afforded to the Planning Commission under the PQP District regulations, should the Planning Commission make the required findings and approve the project as proposed, the project would be found to comply with all applicable zoning requirements and development standards.

### **WATER NEUTRALITY**

In August 2015 and pursuant to Ordinance 2015-5 the City of St. Helena established mandatory water efficiency measures for new construction, and adopted water demand offset requirements enumerated in Chapter 13.12.050 of the Municipal Code. Amongst these provisions is the requirement that any "new development" (i.e. construction that would introduce any freestanding building that contains water-using fixtures, any floor area additions to existing nonresidential structures, or any residential additions or remodeling that increases the number of independent living units) offset new demand by an amount of water equal to the new demand placed on the city water system using the methodology defined in Code section 13.12.050. The offset must be clearly demonstrated to the satisfaction of the Director of Public Works.

The CIA Campus currently operates under two separate water agreements with the City. The current water allotments authorized by the Agreements allocate an average of 15,900 gpd to Greystone and 4,750 gpd to the Vineyard Lodge Housing site. The total allotment across the two sites amounts to an average of 20,650 gpd or 23.1 acre feet (AF) per year.

Under the CIA Campus Master Plan, the applicant proposes to rescind the two separate Agreements and adopt a new Joint Water Use Agreement which would redistribute the gross water allotment across the two sites to reflect the reduction in water use at the Greystone site and accommodate the anticipated increase in water use at the Vineyard Lodge site, while maintaining the existing gross water allotment of 23.1 AF per year. The ability of the project to remain within the current gross allotment



of 23.1 AF per year is made possible through the installation of new more efficient fixtures at the two project sites.

A condition of approval will require that the applicant enter into a new water use agreement with the City which will impose adequate enforcement methods that are trackable and sufficiently enforceable so as to ensure that the authorized allotment is not exceeded. Under the proposed Joint Water Use Agreement required per condition of approval the project will not generate a net increase in water use relative to what was originally approved. As such, the project has been found to comply with the City's water neutrality policy.

### **DEMOLITION PERMIT**

Zoning Ordinance Section 17.164.050(E) implements the policy direction provided in the General Plan. As provided in this section, no permit authorizing the demolition of any building within any zoning district shall be issued until approved by the Planning Commission in accordance with the following findings. Staff analysis is shown in italic text.

1. That, based on the public record and testimony presented at a public hearing, the building is determined not to be a significant architectural or historical building.

*The applicant is requesting a permit to demolish the former Marlinda Convalescent Home and what is today known as "Vineyard Lodge 1". The building was constructed c.1960. Following review of available records, consultants, Architectural Resources Group, determined that the subject building proposed for demolition does not meet the Criteria for listing on the California Register of Historic Resources (CRHR) given that it does not exhibit architectural significance, is not associated with any significant themes or persons and is not expected to yield any information important to expand our understanding of history or prehistory. Staff concurs with this determination.*

2. That the demolition does not eliminate elements that are required to maintain the essential character of the neighborhood.

*As a 1960s era convalescent home located in an otherwise agriculture and residential area, the building was not found to be particularly cohesive with the existing environment. Given this, it's demolition is not expected to adversely impact the essential character of the neighborhood. Accordingly, Staff finds that the demolition of the proposed building will not negatively impact a historic resource or existing visual environment.*

### **DESIGN REVIEW**

The purpose of design review is to, amongst other things, promote the qualities that bring value to the community and foster attractiveness and functional utility of the community as a place to live and work. To approve design review, the Commission must find that the project is consistent with the design criteria prescribed by Section

17.164.030 and exhibits a quality of design that is compatible with adjacent development, features a siting, scale, massing and architectural style that is generally consistent with the predominant development patterns and that does not otherwise detract or negatively affect the established character of the surrounding neighborhood.

Project activities at the Vineyard Lodge Housing Site include demolition of the existing Vineyard Lodge I and construction of three new dormitories ranging in size from 11,380sf to 17,885sf, for total new construction of 40,645 sf. The dormitories will exhibit a maximum height of 40'2" and are stepped to reduce the visual prominence. Through the introduction of screening and strategic design elements, the design of the three new buildings endeavors to reduce visual impacts and promote compatibility with surrounding properties.

As detailed above, under "Project Background", the following comments were communicated at the neighborhood meeting held in April 2016:

- Reduce massing,
- Increase setback along Pratt to retain vegetative screening,
- Reduce square footage,
- Use design to shield/attenuate noise, and
- Make new construction more cohesive with existing VL 2

In response, the applicant implemented the following changes:

- Increased setback along Pratt Avenue from 5 to 20 feet,
- Confined three story portions of buildings to rear of the development
- Reduced square footage by 1,965 square feet,
- Introduced central courtyard such that surrounding construction will attenuate noise generated by student gatherings, and
- Better incorporated Vineyard Lodge II by introducing a courtyard, removing parking from the area between the existing and proposed construction, and introducing porches to the side of Building A

To further ensure that visual impacts of the proposed project are kept to a minimum, the applicant prepared a Visual Impact Assessment based on the Bureau of Land Management (BLM) methodology which attributes numerical ratings to the existing conditions and project build out conditions. These numerical ratings are tied to the presence of seven key landscape components that include landform, vegetation, water, color, adjacent scenery, scarcity, and cultural modifications. Projects that create a high level of contrast to the existing visual character of a project setting are more likely to generate adverse visual impacts due to the inherent visual compatibility. Conversely, projects that create a low level of contrast to the existing visual character are less likely to generate adverse visual impacts due to inherent visual compatibility. It is worth noting that this BLM methodology is the most technical visual impact assessment familiar to staff.

The Visual Impact Assessment (**Appendix U of the IS/MND**) found that with the natural color palette, stepped design, retention of existing trees adjacent to the public right-of-way and the addition of proposed new trees, the impact to the existing visual environment and character of this stretch of Pratt Avenue would not be adversely effected. Accordingly, Staff finds that the project is able to meet the Design Criteria parameters, as detailed below.

### Design Criteria

1. Consistency and compatibility with applicable elements of the general plan;

*As stated above, the subject project is consistent with General Plan policies 4.3.4, 2.6.2, 2.6.4, 2.6.5 and HE 1.5, 2.112.2, and 2.6 in that the project would consist of infill on an already developed site, would occur in a logical and orderly manner proximate to urban services, and would be of a size and design that is consistent with existing site development. Further, the site would not encroach into or otherwise hinder agricultural activities in the vicinity of the subject site. As a previously developed site within approximately one mile of the Greystone Campus, the project location at 830 Pratt is well suited to accommodate student housing at a higher density and provide a creative solution to the need for affordable student housing. As such, the project is determined to exhibit overall consistency with the intent of the General Plan and Housing Element.*

2. Compatibility of design with the immediate environment of the site;

*The project site is situated at the northern border of St Helena's urban limits where medium density housing development is bordered by agricultural land uses immediately to the north and east. Adjacent development includes the Beringer Winery warehouse building and wastewater treatment facilities. Therefore, the visual character of the project area is comprised of both residential scale single-family residences (south and west) and agricultural uses including processing and storage (north, east, and west) building and facilities.*

*The subject site is currently developed with two dormitory buildings ranging from one to two stories in height. The one-story building will be demolished and the two story building is to be retained. The expansion of the Vineyard Lodge House is generally consistent with what is presently on the site and would not substantially alter the existing relationship of the site to its surroundings or otherwise make the site incompatible with the surroundings. The new construction would be clustered on the site and exhibit defined boundaries and generous vegetative screening. As such, compatibility of the site with its surroundings is found to be maintained.*

3. Relationship of the design to the site;

*As stated above, the site configuration will include a series of four buildings ( 3 new) clustered around a central courtyard and traversed by a one-way access road. Those buildings with frontage on Pratt Avenue will feature a stepped design and a minimum setback of 20 feet from Pratt Avenue so as to limit visual prominence and provide continuity with other properties proximate to the site, which are developed with similar setbacks. Therefore, given the site constraints,*

*the relationship of the design to the site appears to strike an appropriate balance between function and aesthetics.*

4. Determination that the design is compatible in areas considered by the board as having a unified design or historical character;

*The segments of Pratt Avenue proximate to the subject site do not exhibit a unified or historical character. The surrounding area features residential uses, industrial/agricultural production uses, and vineyards. The proposed design is generally consistent with Vineyard Lodge II and the existing character of the site and would not depart significantly from that existing character. The project is therefore not expected to impact an area having a unified or historical character.*

5. Whether the design promotes harmonious transition in scale and character in areas between different designated land uses;

*The subject buildings with frontage on Pratt Avenue will be stepped in height such that the buildings along Pratt will be two stories in front ( with max height of 29'2") with taller (3-story) portions confined to the rear of the site (max height of 40'2"). Similarly, the buildings will feature a minimum 20' setback from the Pratt Avenue Property line (50' from Pratt Centerline) in an effort to reduce the perceived massing and scale and promote a harmonious transition in scale relative to residential buildings proximate to the site and in relation to the agricultural production facilities nearby. Further, this site serves as a transition from the adjacent agricultural production and warehouse use on the Beringer property to the single family and vineyard uses further down Pratt Avenue.*

6. Compatibility with future construction both on and off the site;

*The project design is contemporary in style, but with traditional detailing. The buildings feature a neutral color palette. The proposed design would not introduce an element that was so unique or exceptional as to make it incompatible with future development on and/or off site.*

7. Whether the architectural design of structures and their materials and colors are appropriate to the function of the project;

*The proposed buildings will be contemporary in style, but feature some craftsman-like details including wood columns and brackets. The building will be supported by an exposed, parge coated foundation. Exterior walls would be clad in a combination of painted clapboard siding and stained red cedar siding and punctuated with clad windows. The buildings would feature articulated roof-lines with asphalt shingles. The proposed color palette includes neutral hues like brown, natural wood, and moss green. The proposed color and materials reflect traditional materials and colors that would help the buildings to more readily blend in with their surroundings. The architectural design, material, and colors are responsive to the needs of the site and appropriate to the function of the project and generally compatible with adjacent buildings and uses.*

8. Whether the planning and siting of the various functions and buildings on the site create an internal sense of order and provide a desirable environment for occupants, visitors and the general community;

*The proposed site configuration would feature three buildings clustered around a central courtyard. The site would be traversed by a one-way access road with parking clustered around the outer portions of the site, screened with significant amounts of vegetation. As such, the site configuration is expected to provide for a desirable environment that is both functional and aesthetically pleasing to residents and the general community.*

9. Whether the amount and arrangement of open space and landscaping are appropriate to the design and the function of the structures;

*The project proposes a generous level of landscaping and will retain a number of trees at the property frontage to promote screening. The level of landscaping will soften the look of the new buildings and appears to be appropriate for the use and to promote continuity with surrounding properties.*

10. Whether sufficient ancillary functions are provided to support the main functions of the project and whether they are compatible with the project's design concept;

*The project will include interior students commons and dining area as well as an outdoor courtyard and amenity area. In addition, the project will provide alternative forms of transportation to serve the student population and facilitate ease of travel between the subject site and Greystone Campus as well as other destinations. Given the on-site amenities and provision of alternative transportation, the project is expected to provide sufficient ancillary functions to support the functionality of the student dormitory use and which are of a design that is consistent with the overall aesthetic.*

11. Whether access to the property and circulation systems are safe and convenient for pedestrians, cyclists and vehicles;

*Primary automotive access will from Pratt Avenue and Vineyard Road, both of which were found to provide adequate circulation and access to the project site and have been conditioned to be improved to address project specific impacts. Onsite circulation and access is provided via one-way access road off of Vineyard Road and exiting at Pratt Avenue. This access road is expected to provide convenient vehicular site access. In addition, the project will be subject to Mitigation Measure Trans-2, which amongst other things, requires that the applicant introduce a Class II bike lane along westbound Pratt Avenue (northern side) extending from the project site to the intersection of SR 29 (Main Street) and Pratt Avenue and restripe for a fog line along eastbound Pratt (southern side) extending from the project site to the intersection of SR 29 thereby promoting more safe and convenient connectivity for bicyclists. Accordingly, the project is expected to promote safe and convenient access for all types of transportation.*

12. Whether natural features are appropriately preserved and integrated with the project;

*As a previously developed site, the Vineyard Lodge Housing site does not contain any significant natural features with the exception of some Coast Live Oak Trees. To accommodate the proposed buildings, the project will remove two (2) Coast Live Oaks, which pursuant to Mitigation Measure BIO-1, shall be replaced in-kind and at a ratio of three (3) new 15 gallon trees for every one tree removed. A portion of replacement oaks may be accommodated on the Greystone Campus if*

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*site constraints are such that all replacement trees cannot be accommodated within the proposed site plan. As such, the project will integrate natural features to the extent possible and where that is not possible, will mitigate accordingly.*

13. Whether the materials, textures, colors and details of construction are an appropriate expression of its design concept and function and whether they are compatible with the adjacent and neighboring structure and functions;

*Please refer to response No. 7.*

14. In areas considered by the board as having a unified design character or historical character, whether the design is compatible with such character;

*Please refer to response No. 4*

15. Whether the landscape design concept for the site, as shown by the relationship of plant masses, open space, scale, plant forms and foliage textures and colors create a desirable and functional environment and whether the landscape concept depicts an appropriate unity with the various buildings on the site;

*The proposed landscape plan will feature a variety of trees, shrubs, and sod. The majority of existing Camphor trees at property frontage will be maintained. The landscape plan will feature 21 plant types which will be distributed throughout the site and promote continuity and unity throughout the site as well as soften the look of paved parking areas around the periphery of the site and provide shade.*

16. Whether plant material is suitable and adaptable to the site, capable of being properly maintained on the site, and is of a variety which is suitable to the climate of St. Helena;

*With the exception of the sod, all proposed plant materials are considered "low" water use plantings and are expected to be adaptable to the St. Helena climate. Further, all plantings on site are required to comply with the City of St Helena Municipal Water Efficient Landscape Ordinance, which regulates landscaping water use.*

17. Whether sustainability and climate protection are promoted through the use of green building practices such as appropriate site/architectural design, use of green building materials, energy efficient systems and water efficient landscape materials.

*As detailed herein, the project will use efficient fixtures and comply with Title 24 building standards. In addition, most landscaping will be comprised of low water use planting and will comply with the City of St Helena Municipal Water Efficient Landscape Ordinance.. Further, the project will limit parking so as to avoid inducing vehicular travel demands and Green House Gas production by promoting use of alternative transportation and ride sharing. As such, the project will promote sustainable practices and climate protection.*

### **USE PERMIT**

The purpose of a use permit is to allow the proper integration in the city of essential or desirable uses which may be suitable only in certain locations or zoning districts, or to ensure that such uses are designed or arranged on the site in a particular manner. In its

review of applications for use permits, the planning commission shall evaluate each proposed use in order to consider its impact on the city. No use permit shall be granted unless all of the following general findings can be made (Zoning Code Section 17.168 040).

It is the purpose of the PQP public and quasi-public district to provide for government-owned facilities, public and private schools and quasi-public uses. Due to the wide variety of possible public and quasi-public uses and legal relationships involved it is not possible to fully implement a traditional list of uses with fixed development standards. As such, all uses within the PQP Zoning District are subject to a use permit approval with the determination of appropriate development standards (e.g. setbacks, height, etc.) being deferred to the Planning Commission.

The Vineyard Lodge dormitories are appurtenant to the CIA at Greystone and provide affordable and convenient lodging for students enrolled in a culinary program. At present the Vineyard Lodge Housing Site supports a total of 101 residents. Under the project, the facility would be expanded to accommodate a total of 224 residents, equating to a net increase of 123 on-site residents. The operation of the site would not substantially change, but the intensity would increase.

As conditioned, it is expected that the project would continue to operate in an acceptable manner and consistent with the findings enumerated below. Accordingly, staff finds that the project would comply with the Use Permit provisions, as detailed below.

#### Findings to approve a Use Permit

1. That the proposed use would not generate odors, fumes, dust, light, glare, radiation or refuse that would be injurious to surrounding uses or to the community.

*The site operation is expected to be substantially similar to that currently existing. There is no expectation that the expansion of the student housing would generate odors, fumes, dust, light, glare, radiation or refuse that would be injurious to surrounding uses or to the community.*

2. That the proposed use would not generate levels of noise that adversely affect the health, safety, or welfare of neighboring properties or uses.

*At project operation, the onsite land use at the Vineyard Lodge Housing Site and associated noise environment will continue to be typical of a multi-unit development (dormitories) and subject to the City's noise exposure standards. The expansion of the Vineyard Lodge Housing site is not expected to introduce a substantial permanent increase in the ambient noise environment due to activities onsite or as a result of stationary or mobile sources. The noise generating elements of the proposed project such as outdoor conversations, mechanical equipment, the operation of landscaping equipment, car engines and car doors would be similar to the existing noise environment present on-site and*

*in the vicinity. The project is expected to introduce noise elements at levels that are generally consistent with the ambient noise conditions.*

3. That the proposed use would not generate traffic noise in excess of the "normally acceptable" range identified in the General Plan.

*As detailed in the Noise Impact Study (Appendix L of the IS/MND), the project is expected to add less than 8 trips to Pratt Avenue during the a.m. and p.m. peak hours. This would constitute a negligible increase in traffic noise of less than 0.5 dB which falls well below the threshold of a perceptible change of 3 dB. As such implementation of the proposed project will not substantially increase traffic noise in the area.*

4. That the proposed use would not make excessive demands on the provision of public services including water supply, sewer capacity, energy supply, communication facilities, police protection, and fire protection.

*The Project will not result in substantial adverse impacts associated with any public facilities or services. The project site is located adjacent to the urban limit line and is well served by existing public utilities and services. The project will not generate a substantial increase in demands that warrant the expansion or construction of new public facilities. The project site is also located proximate to the police and fire stations. Additional fire service and police calls may occur as a result of the project. However, the project will be subject to the payment of development impact fees, including the Public Safety Impact Fee which funds equipment and facilities' costs for Police and the Fire Departments that may go towards vehicles, capital equipment, and building improvements so as to maintain a high level of public safety. Accordingly, the project will not place excessive demands on any public services.*

5. That the proposed use would provide adequate ingress and egress to and from the proposed location.

*The project's internal circulation plan has been reviewed and meets all requirements of the St. Helena Public Works & Utilities and Fire Departments. Site circulation was determined to be adequate, including sufficient street widths to allow for fire truck turn around and sufficient access to residential buildings. Therefore, ingress and egress is considered adequate.*

6. That allowing the proposed use would not conflict with the City's goal of maintaining the economic viability of a local serving economy.

*The proposed student housing is appurtenant to the Culinary Institute of America Greystone Campus. The housing would not displace local serving uses nor impair the City's viability of maintaining a local serving economy.*



7. That the proposed use would be compatible with surrounding land uses and would not conflict with the purpose established for the district within which it would be located.

*The Vineyard Lodge site exhibits a land use and zoning designation of PQP: Public-Quasi-Public. The PQP zoning designation does not prescribe specific development standards, but rather stipulates that all projects within the PQP zoning district be subject to a conditional use permit and that development standards shall be established through the use permit review process. These regulations help guarantee that incompatible development and/or activities can be avoided by requiring such projects be held to a high level of scrutiny and are vetted through the public review process, CEQA review, and would be conditioned accordingly. Given that the proposed use serves an infill and expansion of an existing use there is no expectation that the proposed project would introduce an element that would conflict with the intent of the PQP zoning designation.*

8. That the proposed use would not be in conflict with the City's General Plan.  
*As detailed, herein the project would comply with applicable General Plan policies.*
9. That the proposed use would not be injurious to public health, safety, or welfare.  
*The proposed project consists of infill student housing that would operate in a manner substantially similar to the existing Vineyard Lodge Housing. As such, the project would not be injurious to health, safety, or welfare.*
10. That granting the use permit would not set a precedent for the approval of similar uses whose incremental effect would be detrimental to the City or would be in conflict with the General Plan.

*Use permits are considered on a case by case basis and based on the specific merits of a given project. Accordingly, the granting of this use permit would not influence future decisions or otherwise set a precedent.*

11. That, as demonstrated on a detailed plan submitted by the applicant, adequate off-street parking to accommodate the long term parking needs of employees and business owners and customers is available.

*The applicant proposes to provide a level of parking commensurate with the demand exhibited by the current residents of Vineyard Lodge Housing Site. At present, 31 percent of residents hold parking permits. It is reasonably expected that this level of demand would continue with implementation of the proposed project which would translate to 69 designated spaces for the total proposed resident population of 224 students. .*

*There is no reason to believe that the student to vehicle ratio would substantially change under the proposed project, namely because (1) the CIA retains authority to issue or not issue parking permits, (2) the project will be subject to a condition*

*of approval stipulating that it may not issue more than 69 parking permits, and (3) the site is uniquely operated in that it provides frequent reliable transportation to and from the Greystone Campus and to other locations, as needed, will provide three on-demand rental cars, and per mitigation measure LU-1, will be required to introduce a scalable bike share program that may be expanded as demand necessitates. As such, the project is expected to be able to accommodate long term parking needs for residents of the site.*

12. That the capacity of surrounding streets is adequate to serve the automobile and delivery truck traffic generated by the proposed use.

*As detailed in the Traffic Impact Report ( Appendix Q of the IS/MND), The project's trip generation is minimal (approximately 4 trips during am and pm peak hours) and therefore the capacity of streets is presumed to be adequate.*

### **VARIANCE**

The applicant has applied for two separate variances for (1) a reduced setback along Pratt Avenue and (2) a reduction in parking and discussed, below.

1. **Reduced setback along Pratt Avenue.**

Under Municipal Code Section 17.112.050, properties located along the northwesterly side of Pratt Avenue and in between the Railroad tracks and the Napa River are subject to a special 36' setback.

The applicant asserts that given that the property was required to dedicate a 20' strip of land at property frontage such that the property line intrudes 10', if not 20' further into the parcel relative to neighboring parcels and therefore a 36" setback as measured from the property line would be excessive. The Applicant purports that if neighboring properties were subject to the 20' ROW dedication, they would only exhibit an approximately 5 to 20' setback and could not reasonably meet the 36' special setback. As such, holding the Applicant to this standard prevents the Applicant from enjoying property rights possessed by other properties in the same District.

As detailed in the variance request (**Attachment 4**), Vineyard Lodge 1 is currently located seven (7) feet from the property line and substantially within the 36' special setback. Accordingly, in order to not introduce a greater non-conformity, the applicant is proposing to site the new construction such that it features a 20' setback from the property line which would effectively be a 36' setback from the Pratt Avenue ROW. The applicant offers that this would provide a 36" buffer along Pratt Avenue and therefore may meet the intent of the special setback. Last, the Applicant asserts that the level of landscaping and vegetative screening provided would further reduce any impact generated by the new construction and therefore, the project would not negatively affect the immediate environment or otherwise be detrimental to the public health, safety or welfare of

the community. Variance Criteria and a discussion of how the project meets each criterion are detailed, below.

To approve the setback variance, the Planning Commission must find that:

- (a) A hardship peculiar to the property, not created by any act of the owner, exists. In this context, personal, family or financial difficulties, loss of prospective profits, neighboring violations, are not hardships justifying a variance.

*The currently configured parcel was created in 1971 subject to dedication of a 20 foot strip of land along the northwesterly side of Pratt Avenue, creating a 60 foot right of way. As demonstrated in the applicant's setback variance request, neighboring properties were either (1) not required to dedicate land, or (2) were required to dedicate only a 10 foot strip of land. In addition, the property has a unique triangle shape with its widest and most developable portion immediately adjoining the property line subject to the special Pratt Avenue setback requirement. Literal enforcement of the 36 foot setback requirement from the property line—which encroaches 10-20 feet more into the property than does the property line at neighboring properties—would create a hardship peculiar to the property.*

- (b) The Variance is necessary for the preservation and enjoyment of substantial property rights of the applicant which are possessed by other properties in the same district and in the same vicinity; and that a Variance, if granted, would not constitute a special privilege of the recipient not enjoyed by his or her neighbors.

*Granting a variance would not constitute a special privilege for the property relative to neighboring properties. Six neighboring homes on the northwesterly side of Pratt Avenue are situated within the special 36 foot setback, none of which were required to dedicate a 20 foot strip of land like that of the subject property. The proposed development plan will exhibit a greater setback than what currently exists for the Vineyard Lodge 1 building (proposed for demolition). In light of the above, it is found that granting a setback variance is necessary for the preservation and enjoyment of the applicant's substantial property rights that are possessed by nearby properties that are developed in similar proximity to the northwestern boundary of Pratt Avenue.*

- (c) The authorization of the Variance will not be of substantial detriment to adjacent properties, and will not materially impair the purpose and intent of this Chapter or the public interest, nor adversely affect the General Plan.

*Authorization of the Variance will not be of substantial detriment to adjacent properties, nor will it materially impair the public interest, as the new developed portion of the property will be located further from Pratt Avenue than the existing Vineyard Lodge I, proposed for demolition. In addition,*

*large mature trees along a substantial portion of the site frontage and along its other borders will screen the views of the new dormitory development. Recognizing the unique nature of the property and granting a Variance does not impair the purpose and intent of the Code's Variance chapter.*

*The chapter's stated purpose is, in part, to allow for deviation from a strict application of the Code in the event that a property exhibits an unusual shape or other exceptional characteristic, and as a result would be subjected to practical difficulties or undue hardship in their development. Authorization of the Variance is consistent with St. Helena's longstanding efforts to manage growth by encouraging further development of already developed parcels, rather than removal of vineyards within City limits, and would not adversely affect the General Plan. The project's 123-bed expansion to serve a projected enrollment expansion of 100 students will allow students who currently compete for housing with members of the St. Helena workforce to move into student dormitories; freeing up that housing would benefit St. Helena families and employees.*

- (d) The condition or situation of the specific piece of property for which the Variance is sought is not so general or recurrent in nature as to make reasonably practicable the formulation of a general regulation for such condition or situation

*The property has a unique shape and was required to dedicate a larger strip of land relative to other nearby properties subject to the 36 foot special setback. Accordingly, the property's condition is not so general or recurrent in nature to make formulation of a general regulation addressing the issue reasonably practicable.*

- (e) The Variance and any buildings or structures permitted by the Variance will not be detrimental to the public health, safety and welfare of the community.

*Neither the Variance nor structures permitted by it will be detrimental to community public health, safety, and welfare. Granting the Variance will allow development of new student dormitories further removed from Pratt Avenue than the existing Vineyard Lodge I building. The applicant has designed the dormitory buildings to be partially screened by large, mature trees located along the site's borders. Reducing parking spaces on the site, and restricting supply of parking permits for student dormitory residents will remove vehicles from the City's streets, particularly St. Helena Highway. Student residents will have ample transportation alternatives: the frequent shuttle service between the property and the Greystone Campus, free access to on-site bicycles and the new bicycle lane provided by the Culinary Institute of America along Pratt Avenue, and the St. Helena shuttle and VINE transportation. The parking Variance further discourages private automobile trips by Culinary Institute of America students in and around St. Helena, and therefore confers a benefit to the community.*

## 2. **Reduced number of parking spaces at the Vineyard Lodge Housing Site.**

As detailed above under the Zoning Discussion, the Public and Quasi-Public development standards defer to Chapter 17.124 regarding parking spaces. Given that, of all the uses referenced in this code section, the dormitory use is most akin to "rooming, boarding or lodging house", those requirements have historically been applied to this site.

The code section stipulates that "rooming, boarding or lodging houses" shall provide two (2) spaces for the resident owner plus one (1) space for each guest room, meaning that the project should include a total of 175 parking spaces. At present, the applicant proposes a total of 72 parking spaces (69 designated spaces and 3 spaces for on-demand rental cars). Given that the parking demand has historically only necessitated spaces for 31 percent of students, the applicant is proposing to include parking commensurate with that historical demand.

With the operation of the shuttle service, rental cars, and the provision of at least five on-demand bikes as required pursuant to mitigation imposed on the project, it is expected that the demand for vehicles would be off set to such an extent that 69 designated parking spaces would be sufficient. Findings needed to approve a parking variance and accompanying justification for each is detailed below.

To approve a parking variance, the Planning Commission must find that:

- (a) A hardship peculiar to the property, not created by any act of the owner, exists. In this context, personal, family or financial difficulties, loss of prospective profits, neighboring violations, are not hardships justifying a variance.

*Imposition of the Code's parking requirement for a "rooming, boarding, or lodging house" or "hotel" in the student dormitory context would create a hardship peculiar to the property. Rooming, boarding, or lodging houses traditionally serve individuals unaffiliated with a college or university, who in a community such as St. Helena likely would require use of an automobile for daily activities. Similarly, hotels in St. Helena traditionally serve visitors exploring the region's amenities by private automobile. Requiring one parking space for each guestroom in those contexts is justifiable given the expected patterns of vehicle use, and the potential that failure to provide ample parking spaces could negatively affect neighboring properties. The Culinary Institute of America's students, on the other hand, are offered shuttle service for their daily trips to and from the Greystone Campus, do not require a car for the vast majority of their daily school-related activities, and are offered on-demand car rental for personal trips as well as access to free bicycles on site. Imposition of a one space per dormitory room requirement would create a hardship by dramatically changing the project as proposed and would require elimination of an open quad gathering area*

*and potential reduction in number of student beds in favor of a hardscape parking lot.*

- (b) The Variance is necessary for the preservation and enjoyment of substantial property rights of the applicant which are possessed by other properties in the same district and in the same vicinity; and that a Variance, if granted, would not constitute a special privilege of the recipient not enjoyed by his or her neighbors.

*The Variance would not constitute a special privilege for the property relative to neighboring properties, none of which are developed with student dormitories that require limited on-site parking. Given the unique and limited travel patterns of student residents of the dormitory, with the Variance both the property and neighboring properties will be subject to minimum parking requirements tailored to actual expected travel patterns and parking space demand, and neither the property nor neighboring properties will be required to provide unnecessary parking spaces reducing enjoyment of substantial property rights.*

- (c) The authorization of the Variance will not be of substantial detriment to adjacent properties, and will not materially impair the purpose and intent of this Chapter or the public interest, nor adversely affect the General Plan.

*Authorization of the Variance will not be of substantial detriment to adjacent properties, nor will it materially impair the public interest. The Culinary Institute of America will provide shuttle and on-demand car rental service, will impose a highly restrictive permit system both at the property and the Greystone Campus discouraging students without assigned parking from bringing cars to St. Helena, will provide free bicycles for use by students, and is amenable to restrictions on parking in the surrounding area to benefit nearby residents by discouraging student parking off the property. The Variance serves the public interest by effectively removing vehicles from City streets, particularly St. Helena Highway, encouraging environmentally-friendly and efficient transportation to and from the Greystone Campus. The parking Variance does not impair the purpose and intent of the Code's Variance chapter. The chapter's stated purpose is, in part, to allow variation from strict application of the Code where extraordinary situations or conditions mean that literal enforcement would involve practical difficulties or would cause undue hardship. Here, requiring unnecessary parking spaces would work against the public interest and cause undue hardship to the property and the school. Authorization of the Variance is consistent with City and regional policies encouraging use of alternate modes of travel, both to reduce harm to the environment and to take traffic off local roads, and would not adversely affect the General Plan. These policies and goals are consistent with the project's shuttle service and free bicycle program that reduce the need for parking and provides further support for the parking Variance.*

- (d) The condition or situation of the specific piece of property for which the Variance is sought is not so general or recurrent in nature as to make reasonably practicable the formulation of a general regulation for such condition or situation

*Formulation of a general regulation is not reasonably practicable given the lack of other student dormitories in the City, the targeted transportation options provided to the Culinary Institute of America's students, and consistency with parking reduction practices at other California campuses as discussed in the Crane Transportation Memo that justify the Variance.*

- (e) The Variance and any buildings or structures permitted by the Variance will not be detrimental to the public health, safety and welfare of the community.

*Neither the Variance nor structures permitted by it will be detrimental to community public health, safety, and welfare. Granting the Variance will allow development of new student dormitories further removed from Pratt Avenue than the existing Vineyard Lodge I building. The applicant has designed the dormitory buildings to be partially screened by large, mature trees located along the site's borders. Reducing parking spaces on the site, and restricting supply of parking permits for student dormitory residents will remove vehicles from the City's streets, particularly St. Helena Highway. Student residents will have ample transportation alternatives: the frequent shuttle service between the property and the Greystone Campus, free access to on-site bicycles and the new bicycle lane provided by the Culinary Institute of America along Pratt Avenue, and the St. Helena shuttle and VINE transportation. The parking Variance further discourages private automobile trips by Culinary Institute of America students in and around St. Helena, and therefore confers a benefit to the community.*

## **GROWTH MANAGEMENT**

The City of St. Helena has a Residential Growth Management System (GMS) that limits the number of residential building permits that can be issued each year for new residential units (Municipal Code Chapter 17.152). The stated purpose of the GMS is to regulate the residential growth of the City to approximately 2% per year, while providing for both market rate and affordable housing. Generally, permits are regulated for market rate housing and not for exempt categories of development including all non-residential development (including hotels), replacement or relocated housing, additions, guest cottages, second units and affordable housing.

The category of "dormitories" is not explicitly referenced in the GMS and given that the dormitory use is not a residential development with units available to the open market and the proposed rooms are only available to students attending the CIA culinary program, it is determined that the GMS does not apply to the proposed project. Further, the dormitories serve as temporary student housing and would not be expected to induce growth of permanent residents.

**CEQA**

In accordance with Article 6 and Appendix G of the California Environmental Quality Act (CEQA) Guidelines, an Initial Study and Mitigated Negative Declaration (IS/MND) has been prepared for the proposed project and included as **Attachment 7** of the CIA at Greystone packet. The document contains a description of the proposed project, an analysis of potential environmental impacts resulting from the proposed project, as well as mitigation measures intended to reduce potentially significant impacts to less-than-significant levels.

The IS/MND found that although the proposed project would generate potentially significant impacts related to aesthetics, air quality, biological resources, cultural resources, geology and soils, land use, noise, and transportation, through the introduction of mitigation measures agreed upon by the project applicant, all potentially significant impacts would be reduced to less than significant levels.

The Draft IS/MND was circulated for a 40-day public review period from December 9, 2016 to January 23, 2017. Twelve (12) comment letters were received during the public comment period which communicated concerns related to wastewater generation, water availability, traffic, aesthetics, and safety. A formal response to comments was prepared and is included as **Attachment 8** of the CIA at Greystone packet.

The Response to Comments addresses concerns raised on environmental issues and provide clarification and revision to the IS/MND, as appropriate. Included in Section 3 of the Response to Comments are changes made to the IS/MND. Modifications are denoted using ~~striketrough~~ for deletions and underline for insertions. Modifications to the IS/MND are intended to provide clarification, expand discussion, and enhance understanding of the analysis, site conditions, and potential impacts of the project. No modifications to the IS/MND were so substantial as to warrant recirculation pursuant to CEQA Guidelines Section 15088.5

**PUBLIC COMMENT/ ISSUES**

Issues raised include those topics enumerated above. As mentioned, all issues raised during the public comment period have been responded to in a formal response to comments, included as Attachment 8 of the Greystone Packet. Items of particular concern include the project's proposed reduction in parking and the appropriateness of dense student housing at the subject site. These and other issues raised are discussed in detail as part of the Response to Comments, Attachment 8 of the Greystone Packet.

**Parking**

The sufficiency of parking is of great concern to those who live proximate to the subject site and this issue was raised repeatedly in comments received.

As detailed in the Traffic Impact Report and described herein, the applicant has requested to provide parking for 31 percent of students which would be consistent with the historical demand shown by the dormitory residents. The applicant has indicated that the school's ability to restrict parking permits, together with the



established shuttle program, provision of on-demand rental cars and on-demand bicycles (as required pursuant to mitigation imposed on the project), there would not be a widespread need for personal vehicles and parking spaces and therefore it is fully expected that parking commensurate with the historical demand (31%) would be appropriate.

To further support a reduction in parking, the applicant provided a memorandum from their traffic engineer (**Attachment 6**) providing more in depth information related to parking supply and parking management policies for similar operations. The memorandum reviewed The Institute of Traffic Engineers (ITE) parking generation rates for University and College land uses as well as a number of representative case studies.

The ITE data found that the average parking supply ratio for suburban sites equated to 0.4 spaces per total population and for urban sites was 0.3 spaces. In reviewing parking policies for other representative California Campuses it was found that (1) parking supply is an issue for all campuses examined, (2) most campuses impose highly restrictive permitting policies, and (3) most campuses provided some form of alternative transportation. In light of the above, it can be concluded that the applicant's request to provide parking at a ratio of approximately 0.31 spaces is not unusual for other like uses (albeit more urban ones) and the provision of strict permitting requirements and alternative means of transport are a widely accepted and effective means to managing student parking. As such, there is strong evidence to indicate that providing parking for 31 percent of student residents may in fact be sufficient for this particular use.

#### Appropriateness of the Dormitory use.

Implicit in the public comments received is a concern that the public quasi-public (dormitory) use is not appropriate for the subject site. It should perhaps be clarified that in 2008 and per resolution 2008-5, the site was re-zoned from A-20 Twenty Acre Agriculture to PQP: Public Quasi Public based on the following reasons enumerated in the resolution:

1. The existing urban/developed condition of the parcel would make conversion to agriculture difficult.
2. The small size of the parcel (2.61 acres) makes it improbable that the land can be converted to an economically viable agricultural parcel.
3. The parcel has been in urban use for the last 40 years.
4. The parcel has not been farmed or agriculturally productive for the last 40 years.
5. The parcel is already served by City services (water & sewer).
6. Rezoning the parcel to PQP keeps the existing A-20 zoning ordinance language intact, does not introduce new uses to agricultural parcels, thereby lessening the possibility that other agricultural land will be used for non-agricultural purposes.

The property no longer exhibits an agricultural zoning designation, but rather it exhibits a PQP zoning Designation. Therefore, the subject project was considered in relation to the current designation of PQP and whether it complies with the intent of the PQP zoning District.

**STAFF RECOMMENDATION**

The Planning and Community Improvement Department recommends that the Planning Commission:

1. Adopt the Mitigated Negative Declaration and Mitigation and Monitoring Program for the project; and
2. Adopt a resolution approving a Demolition Permit, Design Review, a Use Permit, and Variance(s) for the Vineyard Lodge Housing component of the Campus Master Plan.

**ATTACHMENTS**

1. Resolution + Conditions
2. Legislative History
3. APN Map
4. Aerial View
5. Project Narrative(s) + Variance Request
6. Crane Transportation Memo, Feb 8, 2017
7. Project Plans

Attachment 9; Public Comment 1

**From:** Tom Thurmond  
**To:** [Lilly Bianco](#)  
**Cc:** [Mary Ann](#); [Laura](#); [Linda](#)  
**Subject:** CIA Dorm Expansion  
**Date:** Friday, December 23, 2016 10:15:12 AM

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Lilly:

I own the vineyard and residential property at 675 Pratt Ave. I have significant concern about the effect of the CIA dorm expansion and other development on the properties along Pratt.

Pratt Avenue already has become very dangerous to drivers, bicyclists, and pedestrians. The road surface is in poor condition, which increases the likelihood of accidents leading to death or injury. Resurfacing the small portion from the CIA dorms to Main St. will not resolve that problem. The City needs to require a larger contribution from the CIA toward repaving ALL of Pratt Avenue.

There is a major problem with speeding along Pratt. Cars and trucks hurtle along day and night at speeds well over the limit, endangering other drivers, walkers, and bikers. The CIA expansion is bound to exacerbate this problem.

It is now often nearly impossible to make a left turn from Pratt onto Main due to the heavy traffic on Main. The CIA expansion will further add to this problem.

When you include the new Las Alcobas hotel on the west side of the intersection and the potential increase in traffic associated with Beringer's planned changes at their Pratt Avenue winery, it makes the situation even more dire.

I realize that the Pratt/Main intersection is under State control. Nevertheless, the City should proactively be taking measures to mitigate the problem.

With the current fiscal problems facing the City, it is incumbent on staff to require the maximum contribution from the CIA to help alleviate the problems they are making worse.

Tom Thurmond  
707-448-6976

## Public Comment 2

**From:** tmbelt@comcast.net  
**To:** [Lilly Bianco](#)  
**Cc:** [Ellsworth, Geoff](#); [Galbraith, Alan](#); [Mary Koberstein](#); [Paul Dohring](#); [Peter White](#)  
**Subject:** City Invites Public Comment on CIA Expansion, Dorm Plans  
**Date:** Friday, December 23, 2016 5:21:32 PM

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Dear Ms. Bianco,

The big bucks behind the CIA needs to pay for the increase in size of the waste water line that will be needed to handle the CIA's new dormitories and increased burden of affluent. The current waste water line is already at capacity that services the Crinella housing tract. Adding another 9,520 gallons a day will over burden the line. It's about time our city management makes these big developers pay for the costs of necessary up grades to our utility infrastructures rather than keep passing them on to the current water and waste water customers. All we hear about lately is how inadequate our waste water facility is and how poorly our city's reputation is with the State Water Board. And now the CIA wants to add to this problem. They need to pay!

Also, the article in the Star leads the reader to believe the CIA wants to reallocate its current water use by changing its agreements with the city. If I read the article correctly, it looks like the CIA wants to use more ground water to make up for the demand at the dormitories. Does anyone meter the ground water currently being taken by the CIA? St. Helena has a moratorium on drilling new wells in the residential area of St. Helena, yet the city is okay with allowing the CIA to pump even more water from the ground. Come on St. Helena City Management, get your act together and make these businesses pay for the adverse impacts these developers and developments place on the residents who live here!

Tom Belt  
1520 Hillview Place  
St. Helena

Public Comment 3

**From:** Celia Lenson  
**To:** [Lilly Bianco](#)  
**Subject:** CIA Expansion  
**Date:** Monday, December 26, 2016 7:34:58 PM

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Good afternoon:

Thank you for posting the article in the Napa Valley Register regarding the expansions of the CIA dorms. My husband and I own house at 925 Pratt Avenue, St. Helena. The only concerns that I have are the following:

1. CIA Landscaping: Since the structure will double in size, I hope the City will consider that the dorms have beautiful landscaping to mitigate the size of the building. Such as Trees and California Native plants.
2. CIA Parking: The City has not enforced parking restrictions on CIA. Sometimes, all of Pratt street looks like a sea of cars. This is a displeased to the Community. No one likes looking at a parking lot considering the cost of the homes on Pratt Street.
3. Bike Lanes: The bikes lanes are a great idea. I hope the City restricts Pratt parking to the residents on Pratt street because CIA abuses the parking on Pratt. Many residents have complained

If all the issues are addressed, I welcome the dorms.

Celia Lenson, Owner  
of 925 Pratte Avenue, St. Helena, CA

Mailing Address  
1114 Clark Street  
Napa, CA 94559

Public Comment 4

**From:** Tittel/Caloyannidis  
**To:** [Lilly Bianco](#)  
**Subject:** CIA DORM EXPANSION  
**Date:** Tuesday, December 27, 2016 3:30:48 PM

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Dear Ms. Bianco,

I read in the St. Helena Star that questions regarding the CIA student dorm expansion may be directed to you.

Is there a definition to the application as to who qualifies as a student. I have to assume that whatever that definition is, any other tenants such as staff, instructors etc would be excluded and that there is associated language to that effect.

I would appreciate your response.

Thank you

George Caloyannidis

Public Comment 5

**From:** [Noah Housh](#)  
**To:** [Lilly Bianco](#)  
**Subject:** FW: CIA Dorm Project Meeting- Follow up  
**Date:** Tuesday, January 17, 2017 11:10:34 AM

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FYI

Noah Housh  
 Planning and Community Improvement Director  
 City of Saint Helena  
 (707) 968-2659

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**From:** Donna Hinds [mailto:[donna@donnahinds.com](mailto:donna@donnahinds.com)]  
**Sent:** Monday, January 16, 2017 11:19 AM  
**To:** Noah Housh  
**Cc:** Brian Russell  
**Subject:** CIA Dorm Project Meeting- Follow up

Noah,

Thank you for meeting with Brian Russell and me on Wednesday, January 11th. We appreciate your willingness to hear our concerns related to the CIA Dorm expansion project on Pratt Ave and evaluate them further. In summary, the following are the concerns we discussed:

- \* Inadequacies of traffic study;
- \* Inadequacies of noise study;
- \* Concerns related to parking variance;
- \* Concerns related to Visual impact;
- \* Concerns related to increased population;
- \* Concerns related to increased impacts on sewer/water;
- \* The lack of evaluation of alternative housing sites that would have less impacts on traffic, noise, visual, parking, etc.;
- \* The requested set back variance in contradiction with the general plan;
- \* The lack of rights to the vineyard road that is crucial to the project;
- \* The need for an Environmental Impact Report due to the significant size and potential impacts of the project.

What are the next steps? Will you be responding to these concerns? If so, when can we expect a response?

Best,

Donna Hinds  
 707-799-4844

Public Comment 6

**From:** Tom Rinaldi  
**To:** [Lilly Bianco](#)  
**Subject:** CIA Dorm Expansion  
**Date:** Wednesday, January 11, 2017 11:12:17 AM

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Dear Ms. Bianco:

Please do what you can to stop the CIA dorm expansion on Pratt Ave.

We have lived on Pratt Ave for more than 35 years, and have seen remarkable changes-many for the worse for small town living. With the remarkable expansion of Beringer, the new (UGLY) hotel at Grandview with a forgettable name on Hwy. 29, the railroad activity to Charles Krug, the waste water aromas of the ponds, the noise of the large neighborhood wineries, increased traffic, faster and faster cars coming through, the erosion of the quality of the road surface to below 3rd world countries; we have seen our neighborhood heading to hell.

The ridiculous expansion of the dorm on Pratt Ave. will be a real nail in the crucifix. These students are people from all over the country who drive out here, do not help our local populace, waste water like tourists, leave as soon as they can, and add **no value** to this town.

Finally, it appears the CIA is slowing or shutting down the Greystone Bldg. in preference for Copia, Napa. Are they going to shuttle them to Napa?

Leave the CIA dorm as it is, Please. If not, name it The West Coast Trump Tower!

Very respectfully yours,  
Tom Rinaldi  
707-963-3808



Public Comment 7

**From:** [Noah Housh](#)  
**To:** [Lilly Bianco](#)  
**Subject:** FW: CIA Pratt Avenue Project  
**Date:** Tuesday, January 17, 2017 12:43:02 PM  
**Importance:** High  
**Sensitivity:** Confidential

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FYI

Noah Housh  
 Planning and Community Improvement Director  
 City of Saint Helena  
 (707) 968-2659

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**From:** Dianna Varozza [mailto:varozza@sbcglobal.net]  
**Sent:** Tuesday, January 17, 2017 12:40 PM  
**To:** Noah Housh; Jennifer Phillips; Sarah Parker; Mary Koberstein; Alan Galbraith; Peter White; Paul Dohring; Geoff Ellsworth  
**Cc:** Aaron Hecock; Bobbi Monnette; Tracy Sweeney; Grace Kistner  
**Subject:** CIA Pratt Avenue Project  
**Importance:** High  
**Sensitivity:** Confidential

In regards to the Pratt Avenue project... It should be separate from the Greystone site paperwork. Trying to read through this is too difficult to determine what is going on at which site. They should be separate applications as they are different locations on different streets.

Is there going to be a stop light at Pratt and Main?

I definitely object to a three story building. Nothing else directly on the street is that tall and if you set precedence now pretty soon there will be three story apartment buildings and homes. This is a quiet street mostly agricultural and it is very dangerous during going work and home hours. Between Beringer employees racing to get to the trail and all of the construction workers parking on Pratt and Main it has been a nightmare trying to pull out of the driveway or onto Main. More people used to walk on Pratt but now they are afraid.

Where are all the construction workers going to park when they are working on this project? The garbage, pour parking jobs, construction trucks and deliveries have been chaos. The construction workers whip a u turn without looking and almost hit moving traffic. They block the view so pulling out onto main can be dangerous. They are trying to cross the street and almost get hit by cars. And now with Pratt closed why isn't there an officer there directing traffic. We can't even pull out and go to the store.

It looks terrible having all those vehicles parked everywhere, delivery trucks, construction equipment. This all needs to be kept off Pratt Avenue.

All of the dust created by construction is damaging to vineyard. If we get even a small amount of dust blowing we will have to get our lawyers involved. What are you going to do to mitigate the

**Public Comment 7**

dust? I am just glad we weren't closer to the hotel construction. What a nightmare for the poor people on the corners.

I would like an answer as to what we can do to stop the three story building and regulate the construction site parking and deliveries to be off Pratt. I am mostly concerned about the construction dust which will damage vineyards nearby. We are directly on the other side of the Beringer strip. They must be concerned about dust on their new block of vineyard.

We live here and have guests at our winery and it needs to not look like a dump driving down Pratt Avenue.

Best regards,

Dianna Varozza  
707-963-0534

Public Comment 8

From: [redacted]  
To: [redacted]  
Subject: [redacted]  
Date: [redacted]  
Re: [redacted]

Jeffrey Lufly

Please see a complaint regarding the CIA access to premises in the Planning.

Begin forwarded message:

From: Patrick [redacted]  
Subject: [redacted]  
Date: January 5, 2017 at 7:24:11 PM PST  
To: [redacted]  
Cc: [redacted]

Question: I think it's appropriate to comment and present this for whatever it's worth.

Please consider:

We've lived a year with constant worker traffic and construction noise from building (Los Angeles River); plus, all the cars constantly sharing CIA people and parked outside this house more than just a few times a year - we counted over 400 vehicles.

We had to call police because we had one girl from CIA (DOH) enter our house at night and sleep partially on our couch - we saw upstairs bedrooms (a storage shed/parking garage) which was horrifying.

Plus there is noise coming down our street constantly - would say 70% of time we're home here, including on early before rain, much that we get the trash cans out almost every week. In addition, if large pool of standing water, making us clean each time.

Non-compliance (you saying that enough is enough and if you add this massive project and industrial facility to State Ave - it's too much for the wonderful people who are paying a huge amount of money to live here expecting peace and serenity.

I hope you agree.

So I would not allow an entrance who lives here and is trying to compare music quality and would not like to experience heavy construction noise and traffic for over 2 years that we join the neighbors here to present this.

Respect your property to let us know your thoughts.

This is covering our health options.

Yes.  
No.

See from my iPhone

Begin forwarded message:

From: Patrick [redacted]  
Date: January 5, 2017 at 7:24:11 PM PST  
To: [redacted]  
Cc: [redacted]  
Subject: [redacted]

Calvin de Brink

We found this in our mailbox after receiving from a few days away. I took a photo of page 1 attached.

It's a 3-page notice. Would you like us to read to you?

Thanks

David & Nancy

## Public Comment 9

**From:** Carol Norfleet  
**To:** [Lilly Bianco](#)  
**Cc:** [Philip Norfleet](#); [Noah Housh](#)  
**Subject:** Pratt Ave CIA Dormitory  
**Date:** Wednesday, January 18, 2017 9:02:37 AM

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Dear Ms. Bianco,

I am writing to oppose the expansion of the Greystone Vineyard Lodge facilities on 830 Pratt Ave. in St. Helena.

My understanding is that the proposed expansion will create 224 beds which is an increase of 123 students. My personal opinion is that the retirement home that was the original structure on the property should never have been changed to a dormitory for Culinary Institute students. I believe that if the CIA wants to have more students they should either construct a property on their Greystone campus on Highway 29 or build a new dormitory near the former Copia site in the city of Napa.

I believe the impact on Pratt Avenue and subsequent impact for the city of St. Helena all produce negative effects. Pratt Avenue is one of the poorest maintained streets in St. Helena. There are constant potholes in the road that are not properly repaired, the entire road needs repaving, there are no sidewalks, despite the fact that there is a CIA student bus that makes innumerable trips up and down the road there still are students regularly walking on the side of the road often in predawn and night hours creating a very dangerous situation. They are unable, generally, to walk on the traffic facing side of the street because at least six months of the year there is a stream of water running down the south side of the street that is emitted from a sump pump at the residence at 1055 Pratt Ave. I strongly feel that the city either needs to create a storm drain to properly capture that water or to eliminate the exception that must've been created for dumping this sump pump water into the street. I will also note that despite the fact that rains stop in the area in the late winter that particular residence is in essence creating an artesian well in the full basement that pumps water seasonally into June creating a marsh and mosquito habitat at the intersection of Pratt Avenue and the railroad tracks. It seems that every other street in St. Helena has proper gutter sidewalks and storm drains adjacent to residential homes except for this stretch of Pratt Avenue.

In examining the site plan for the new dormitory it's very clear that every single square foot of land is being used, packing on as much density as possible, exceeding height restrictions and visual sensibilities. There should not be a variance for building setback as proposed from 36 feet to 20 feet. Additionally the site plan has the exit from the plan coming directly into the intersection for the railroad tracks that are now being used for a wine train going up to Krug winery. A portion of the building is 40 feet high which is certainly not conducive to the rural nature of what this street is and clearly will affect other property owners in the area from a view

## Public Comment 9

point of view.

Despite the fact that there is a shuttle that goes to the Greystone campus it is inevitable that 123 new students are going to create much more traffic. I'd like to point that out several years ago there was a multiple fatality accident on Pratt at the end of the road involving some of the students from Greystone. It seems inevitable that doubling the size of the facility is going to significantly impact traffic use and noise on our street. This traffic impact also becomes immediately significant as one looks at the current extreme difficulty of making a left-hand turn from Pratt Avenue south on to Highway 29. It is currently extremely difficult to see what is approaching on the left-hand lane because of parked cars, at the very least the curb needs to be red painted at least six car lengths back from where it is now. Additionally with the pending opening of the Los Alcobas Hotel there will be additional significant difficulty in entering and exiting from Pratt Avenue. This will not only apply to the student buses but also to the students that would be coming and going from this dormitory. This currently is and will become a much more dangerous intersection certain to create accidents.

We are all aware of some of the economic issues facing the city of St. Helena and clearly one way to solve them is to promote the development of architecturally appropriate high quality hotels that will attract individuals with the capability to afford a significant average daily rate and quality that would then provide subsequent TOT revenue to the town. What this proposal does instead is create a hotel with insignificant TOT from students who certainly are not going to significantly support high quality restaurants and retail shops within the city itself.

As stated earlier our belief is that there should not be a variance for an expansion of the existing student housing facilities, instead CIA should examine other locations including their existing Greystone campus and or their new Copia campus in Napa to effectuate the expansion of their overall programs. Pratt Avenue should remain a rural and residential street not a street of student dormitories creating additional traffic noise water and sewer impacts with insignificant benefits for the existing residents of the street and the city of St. Helena.

Respectfully submitted,

Carol

Carol Norfleet  
*Director*

The Napa Valley Reserve  
1000 Silverado Trail N.  
St. Helena, CA 94574

Public Comment 9

T: (707) 968-3192

C: (707) 291-2338

[cnorfleet@thenapavalleyreserve.com](mailto:cnorfleet@thenapavalleyreserve.com)

[www.thenapavalleyreserve.com](http://www.thenapavalleyreserve.com)

### **St Helena Planning Commission – CIA Dormitories on Pratt Ave**

#### **Members Planning Commission**

In the beginning the CIA dormitories were a convalescent facility. There were from 30 to 40 people there. They took sponge baths and used very little of the bathroom facilities. I personally know as I had relatives there. Somebody needs to go back in the records and see how much water was used as compared to today with the CIA dormitories.

Those 30 to 40 guests more than doubled with the first expansion by the CIA about 7 years ago. The first expansion did not require any upgrades to the Crinella Pump station where the effluent ends up, or any water impact fees.

The Crinella Pump station was built in 1965. It was only to service the Crinella subdivision of about 100 homes. Now the CIA has tied in on Pratt, all the recently built million dollar homes on Pratt with guesthouse, now the Las Alcobas hotel, with no upgrades from any of these developers. Yet the station is #8 on the list of improvements of capital expenses by the new wastewater cost increases. Why are we the residents paying for this and not the developers that are burdening the system. The CIA is going from 4750 gals/day to 10,783 gals/day in to the Crinella Pump station.

The enrollment was 101 students, now they want to more that double that size with 123 additional students without any impact fees or improvements to the Crinella Pump station. That is a 500% increase from the convalescent hospital capacity.

In the report it says they want to take students out of homes they own and put them in these 3 new dormitory buildings. If that is true, then they have to provide the city with a legal document that they will sell these homes when the first dormitory is completed so these homes go back to hopefully the rental market that we desperately need. Also, their statement that their housing is affordable is not correct. I have spoken to students in their facilities and what they pay for a room is more than our rental market prices.

Why are they able to build to 40' with these new buildings? I thought that we had a 35' height limit. These buildings are going to block the view for the neighbors of our beautiful hillsides. The view shed will be lost.

They claim they don't need additional parking. I drive by the dormitories at least 3 times per day, on average the parking lot is between 70% to 80% full most of the time. They claim they only give out 33 permits for the existing 101 students, well then who owns the other vehicles? They claim that the shuttle goes every 15 minutes. To me that adds a larger impact at Pratt and Main. Now with the Las Alcobas Hotel across the street this is a bad intersection. There needs to be a traffic study addressing this. In fact, I feel we need an electric stop lights at this intersection. Most of the day the traffic does not go out onto Main, including truck traffic. They cut through Park and on to Crinella to Main. This is a residential neighborhood they are cutting through.

They are going to demo a 15,050 sqft one story building that houses 41 students. Then they are going to build three 3 story buildings totaling 40,645 and claim there is no impact. Who are they trying to fool?

The Planning Commission needs to say: We need time to assess the full impact of this project. We have been told over and over again about our ageing infrastructure that is in dire need of repair. We need to

find out first the impact the Las Alcobas Hotel is going to have in this area. An environmental impact report is the only way to address all the concerns I have raised.

Originally the CIA was going to build three dormitories on the school's campus. This was so they would not impact the neighborhoods. That did not happen as promised in their original use permit. I would suggest the CIA instead of building these new dormitories on Pratt Av to put them on their campus as they originally proposed. The CIA owns the adjacent property. I personally worked Chuck Carpy's house as a general contractor. The city should rezone the property so dormitories can be built there. Then you eliminate all traffic problems, all view shed issues and since they are reducing their water usage at Greystone the increase of the dormitories can be applied. Plus the city should require these dormitories not use the city's wastewater system but put it in to Greystone's system that discharges in to the pond on Deer Park Road.

Hopefully the Planning Commission will deny the project until these concerns are addressed.



Anthony Micheli

1125 Crinella Dr  
St Helena  
Ph: 707-486-3832



Public Comment 11

**From:** Paul Bertoli  
**To:** [Lilly Bianco](#)  
**Subject:** CIA expansion  
**Date:** Thursday, January 19, 2017 4:07:54 PM

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Attn:contract planner,planning commission:

I am against the proposed expansion of the CIA Pratt Ave dorms.Turning this project surrounded by ag land into the most densely populated parcel in St Helena,would seem to be totally against the will of the general plan.The plan frowns upon putting high/medium density in ag land(leapfrogging)This will also add to the current traffic proplem on Pratt,the new resort,wine train,Beringer/treasury,ramping up production,redirection of traffic by apps,(waze,google,etc) the constant shuttles,will only add to the problem.Water&sewer issues,seeing hundreds of new toilets,while residents conserve water only to have the water rates skyrocket, just doesn't quite seem right.The CIA doesn't allow student cars on campus,or want to rent homes in SH,this shouldn't be the residents problem.People actually live here.Im not so sure what this non profit,or not for profit status is,but I would suggest that they consider using only the facility they've already expanded .The community trusted it was all they needed.With our population at 4900 I would prefer seeing a reduction in enrollment,and a modest tuition increase,in order for the CIA to remain good neighbors.

Thanks  
Paul Bertoli  
St.Helena  
Sent from my iPhone

Sent from my iPhone

Public Comment 12

January 23, 2017

Noah Housh

Planning and Community Improvement Director

City of St. Helena

Dear Mr. Housh, I strongly object to the Culinary Institute of America building additional 123 room dormitory in the residential area of St. Helena. I object for the following reasons:

- They propose using groundwater. Although our aquifer is most likely adequately charged due to the recent rains it will not remain in that condition. This dormitory will be there for an undetermined length of time during which we will have the return of drought. We need our water for residents who live here and the industry that supports our economy. We are told that our wastewater system will require millions to bring it up to code. Why should we add this type of burden to the system?
- The Culinary Institute relocated to Napa the only business that brought any revenue into our City namely their restaurant. Why should we the citizens be asked to share our precious water resource while they bring absolutely nothing to the community? No, I don't believe that closing the restaurant will balance out having 224 students taking showers and other domestic uses.
- The height of the buildings will be offensive to nearby neighbors.
- This particular area of the City is already suffering from too much traffic and too little planning such as an additional stoplight at Pratt and Main.
- Why should they be allowed to build on agricultural land? This is seldom allowed to happen and why should it be allowed in this instance when they bring nothing of value to the community?

Priscilla Dell

25 San Juan Court

St. Helena, CA 94574

Public Comment 13

**From:** [Noah Housh](#)  
**To:** [Lilly Bianco](#)  
**Subject:** FW: CIA Pratt Avenue Project is too many bad points, needs to be cleaned up and down sized  
**Date:** Friday, February 03, 2017 12:18:39 PM  
**Sensitivity:** Confidential

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-----Original Message-----

From: Dianna Varozza [<mailto:varozza@sbcglobal.net>]  
 Sent: Friday, February 03, 2017 12:13 PM  
 To: Noah Housh  
 Subject: FW: CIA Pratt Avenue Project is too many bad points, needs to be cleaned up and down sized Sensitivity: Confidential

We need to make sure that these storage units don't end up here at the Pratt Ave location. This is a nice neighborhood and agriculture area. We are already picking up garbage and dealing with the traffic from the CIA dorms. More traffic and garbage would be really bad. All their event parking is done on Pratt also.

There is no employee parking for the hotel so they will park on Main St all the time. More foot traffic back and forth across Main Street and Pratt Avenue. With all the vehicles parked on that corner it has been a real challenge. Now they are going to have delivery trucks going back and forth to Beringer because that is where their storage is.

I don't shop in St. Helena anymore and that is because getting into town is a safety issue as well as a challenge. It is easier to go to Calistoga or Santa Rosa or Napa.

A lot of people walk on Pratt but these students from the CIA, hotel construction and the Beringer employees drive way to fast trying to get to a from work on the trail. It is like a raceway during commute hours or lunch times. The van from CIA is constantly trying to turn onto Pratt. Increase with more students and their trying to get to their storage units and that will make getting out on Pratt to go into town impossible. So people are going to go through Park and Crinella, there are small children playing and riding bikes there. Someone is going to get hurt or killed. A motorcycle pulled right out in front of me yesterday and if I hadn't been going really slow from turning off Main and because of the sign for the bridge I would have hit him. There were two large delivery trucks completely blocking the view of the street to the left.

There will always be deliveries once that hotel opens that will increase the traffic on Pratt significantly. Whether they are going to the hotel or to Beringer for unloading. Or trying to unload on the street and walk across.

If they want storage they need to build it up close to the CIA where they won't have to drive to get something.

They need to get rid of the third story because that is just going to cause problems all over town, if you let it in here, and it will block the view from the East side.

No more parking on the street and in the vineyard.  
 They need their own parking lot for events also.  
 The parking in the vineyards is going to be a real problem when they either get stuck in the mud or drive over a vine.

Public Comment 13

- Again using Pratt as a bypass and driving way too fast. Clogging up the access to the trail and main street for the people who actually live here and pay the taxes.

Look at the traffic when the trail was closed.

That is what is going to happen every day now that the bridge is closed. We can't even get off Pratt Avenue.

Do you want to know how many times I have turned off Pratt going North and the car in front of me SLAMS on their breaks and squeals the tires because that is the entrance to Beringer's tasting facilities. Now they are blocking North bound. Add in someone trying to cross Main in a truck to the hotel, a guest trying to turn in and go to the hotel or restaurant, a pedestrian and the South bound car coming out of the tunnel of trees at 50 mph. The CIA van trying to turn left onto Pratt.

You have a recipe for disaster and you better figure it out now before there is a death.

Dianna Varozza

Public Comment 14

Planning Commission

Dear Members,

We are writing to you at this time because we are opposed to the CIA expansion proposed to take place across the street from our property at 855 Pratt Avenue.

It is our opinion (which we expressed at that time) that the first CIA dormitory was not appropriate for the area of vineyards and single family residences. After that expansion we have had numerous problems. Frequent traffic with their shuttles and the occupants cars. Late night noise on many occasions. Pot smoking and beer drinking in our vineyard. When trespassers are asked to leave they often refuse to do so.

At the meeting for the previous expansion the CIA representative personally gave us his word that we had only to call him if we had any problems. Each time we called there was no response and never a call back. The situations were never resolved to our satisfaction.

As bad as it is now it will be much worse with twice as many transient occupants who have little or no interest in maintaining any good will with the neighbors during their brief stays.

We own two parcels directly across the street from the dorms. One 6 acre parcel has an old home and a cottage. Our son and his family reside there. The cottage is 500 sq. feet. We can only increase the footage to 800 sq. feet. The old house is supposedly of "historical significance" and hence cannot be razed or modified except to its original design. The original house was a single story with no bath or kitchen facilities.

On the 7 acre parcel we wanted to build a SINGLE story home located 300 feet back from Pratt and surrounded by 13 acres of vineyard. Permits were denied because it was deemed an inappropriate design for the area. We didn't realize if we wanted to build a three story house right next to Pratt we probably could have done so.

It is ironic that we were denied sensible uses for our property but a large commercial campus is being allowed in an area zoned for agriculture and single family housing. Is the continuous ruination of our neighborhood really worth the money the city will receive for allowing this expansion? We don't believe that it is. It certainly is not worth it to us as this very unattractive building just across the street with all its noise and traffic will lower the value of our property.

We strongly oppose any expansion of the CIA dormitory property either now or in the future.

Due to medical issues we may not be able to attend the meeting but we will try to attend.

Fred and Carol Papina  
855 Pratt Avenue

*Fred Papina*  
*Carol Papina*

## Public Comment 15

**Comments of Donna Hinds to  
Culinary Institute of America  
Campus Master Plan**

Dear Planning Commissioners,

Thank you for your time in serving on the Planning Commission and for considering these thoughts related to the CIA dorm expansion proposal for Pratt Ave. My comments and concerns related to this project stem not only from my ownership of two properties on Pratt Avenue,<sup>1</sup> but also from my interest in the general well-being of the City of St. Helena and the impacts this project will have on the City. The discussions in opposition to the project are based, in large part, on areas in which the project is in direct conflict with various provisions of the St. Helena Municipal Code ("Code"). I have quoted the Code throughout the discussion, and suggest that it may be beneficial to have a copy, for reference, while reading this paper. The project, as it relates to the Vineyard Lodge expansion, should be denied, as supported by the following facts and discussions.

**PROJECT FACTS:**

Due to the large volume of information submitted in the Initial Study/Mitigated Negative Declaration ("IS/MND"), together with five appendices, the following is a summary of factual information obtained from the IS/MND that will assist the reader while analyzing this project. (Page references are to the location of the information in the IS/MND)

- Proposed new building square footage: 40,645 (p. 6)
- Proposed demolition square footage: 15,050 (p. 6)
- Existing Vineyard Lodge II square footage: 12,612 (p. 4)
- Proposed Total square footage: 53,257 (12,612 + 40,645)
- Height of buildings: 36' to 40'2" (Appendix 4 Plans p. A101-A107)<sup>2</sup>
- Length of buildings: 112' to 162' (Appendix 4 Plans p. A 101-A107)
- Length of building B fronting on Pratt Ave: 150' (Appendix 4 Plans p. A 101-A107)
- Height of building B fronting on Pratt Ave: 36' (Appendix 4 Plans p. A 101-A107)
- Proposed front setback of building B: 20' (Appendix 4 Plans)
- Proposed side setback of building A: 13' (Appendix 4 Plans)
- Building A is 162' long x 87' wide x 40'2" high and has both 2 and 3 story elements. (Appendix 4 Plans p. A 101-A107)
- Building B is 150' long 42' wide and 36' high and is a two story building. (Appendix 4 Plans p. A 101-A107)
- Building C is 112' long x 42' wide and 40'2" high and is a three story building. (Appendix 4 Plans p. A 101-A107)
- Size of Pratt Vineyard Lodge Lot: 2.61 acre (p. 8)
- Zoning of Project Property: PQP (St. Helena Zoning Map)

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- Zoning surrounding proposed project: Agricultural (St. Helena Zoning Map)
- Location of project: Outside of Urban Limit Line (St. Helena Zoning Map)
- Current number of students at Vineyard Lodge: 101 (p. 5)
- Proposed number of students at Vineyard Lodge: 224 (p. 4)
- Net increase in students at Vineyard Lodge: 123 (p. 5)
- Proposed/Current Number of students at Greystone 47 (p. 4 )
- Total Increased students and Staff at Greystone: 58 (p. 3)
- Current Total number of students: 200 (p. 3)
- Proposed Total number of students: 300 (p. 3)
- Current number of students in outside housing: 52 (200 total, less 47 at Greystone, less 101 at Vineyard Lodge = 52 )<sup>3</sup>
- Proposed number of students in outside housing: 29 (300 total, less 47 at Greystone, less 224 at Vineyard Lodge = 29)
- Net decrease of students in outside housing: 23 (52 -29 = 23)
- Current number of parking places at Vineyard Lodge: 85 (p. 6)
- Proposed number of parking places at Vineyard Lodge: 72 (p. 6)
- Current ratio of students to parking at Vineyard Lodge: 101:85
- Proposed ratio of students to parking at Vineyard Lodge: 224:72

**DESIGN REVIEW CRITERIA:**

The following is a discussion of the design criteria that must be considered by the Planning Commission in reviewing all applicants. These are set forth in Section 17.164.030. While it requires the failure of only one factor for the Planning Commission to make a finding that the design criteria have not been met, this applicant has failed to meet the majority of the design criteria as follows:

**1. Consistency and compatibility with applicable elements of the general plan;** The project is not consistent and compatible with the applicable elements of the General Plan. The Vineyard Lodge is located beyond the Urban Limit Line ("ULL"). The intent of the ULL is to discourage urban sprawl and promote sensitive development which preserves the rural and agricultural lands around the City. The General Plan Guiding Policy 2.6.5, "*Encourages the continuation of agricultural and low-intensity uses adjacent to the ULL.*" The high intensity (massing, height, and building location near Pratt Ave.) of the Vineyard Lodge expansion project is not consistent with this General Plan Guiding Policy and, therefore, should be denied. The building setback variance that has been requested for Pratt Ave. is in direct violation of the General Plan. Pursuant to Section 17.112.050, there is a special setback of 36' on the northwest side of Pratt Ave. from the railroad track to the Napa River. The reason this provision was included in the Code is evidenced by Section 5.3.3 of the Transportation Element of the 1993 General Plan which provides: Guiding policies "*5.3.3 Preserve rights-of-way for future collector streets within the planning area of the City as follows: \* Starr Avenue from Pratt Avenue to Adams Street . . . The City recognizes that development may or may not proceed along the lines envisioned in this plan, and that some areas not currently identified for*

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*potential developments may in fact precede those that are so designated. The intent of the right-of-way preservation designation is to clearly define the interest of the City in maintaining the option for extending its collector street system into these areas. Special setback areas shall be established along collector streets to allow for future widening."* In summary, the special setback on Pratt Ave was established pursuant to the 1993 General Plan (our current governing General Plan) to allow for future widening due to Pratt's designation as a collector street. A variance to this special set back would be in direct contradiction of the General Plan and would result in the loss of ability to widen Pratt Ave in the future. It is not currently clear what traffic patterns will evolve over the next 5, 10 or 20 years and whether or not Pratt Ave. will be needed as a connector street. The topic was raised at the community workshop held on February 4, 2017, when a concerned citizen expressed the need of the City to preserve rights-of-way on connector streets and not give up these rights as was done on the Adams St. extension. As the traffic in St. Helena continues to increase, there may come a time in the future when the City wants to widen Pratt. The allowance of the requested variance would not only be inconsistent with the 1993 General Plan but would also be very short-sighted and result in the loss of the ability of the City to widen a collector street at some point in the future. The request for setback variance should be denied.

**2. Compatibility of design with the immediate environment of the site;** There is not compatibility of design with the immediate environment. The property surrounding the proposed project is zoned agricultural. The property is surrounded by vineyards, residences and residential home sites. The project is simply too massive, is in stark contrast and not compatible with the immediate environment and, therefore, should be denied.

**3. Relationship of the design to the site;** The proposed project is too large and not appropriate for the site. The project feasibility requires multiple variances from the Code and the use of a right-of-way from the neighboring property to the east. The main access road for the proposed project is located on this right-of-way. Section 17.112.010 provides "*Each building site in each zoning district shall be planned and arranged so as to occupy only that portion of a lot not otherwise required as a yard, setback easement, right-of-way, or other required open space;*" The easement has been included in the site plan, as if it is part of the property, but a close review of the northeast property line shows that the buildings have been placed within 13' of the property line. Has the City evaluated the rights under the easement? When will this easement expire? Does the easement allow all uses required by the project? Set back requirements from the northeast property line are not satisfied. Based on these facts, it is abundantly clear that the project design does not work within the site boundaries.

**5. Whether the design promotes harmonious transition in scale and character in areas between different designated land uses;** The design does not promote harmonious transition in scale and character in areas between different designated land uses. According to the St. Helena zoning map, the project is surrounded by A-20 zoning. Therefore, the Planning Commission should look to A-20 zoning requirements to determine whether there is harmonious transition in scale and character between the different designated land uses. The A-20 zoning sets forth development standards in Section 17.20.060. The front and side



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setbacks for A-20 zoning are 50'. The side setback from Building A to the property line on the northeast side is 13', far less than the 50' required by the surrounding zoning. In addition to the discussion related to the front setback in design review element 1., above, it is a standard zoning principle that the larger and taller the buildings, the greater the setback. The A-20 zoning provides for 30' maximum building height. The proposed 36' and 40'2" building heights are clearly not in harmonious transition with the surrounding vineyard and mountain view properties. The project should be denied for failure to promote harmonious transition in scale and character with the neighboring agricultural vineyard and residential properties.

**6. Compatibility with future construction both on and off the site;** Future construction on the site is not applicable. There are two future planned projects of residential construction located directly across the street from the proposed project. This proposed project is not compatible with these residential projects and should be denied.

**7. Whether the architectural design of structures and their materials and colors are appropriate to the function of the project;** The architectural design is not appropriate, due to the degree of intense massing (see prior discussions), and should be denied.

**8. Whether the planning and siting of the various functions and buildings on the site create an internal sense of order and provide a desirable environment for occupants, visitors and the general community;** The proposed buildings are so large that there is insufficient open space for the 224 proposed students. There appears to be insufficient outdoor green area. There is insufficient parking for students. There is no parking accommodations for visitors. Building B is located only 20 feet from Pratt Ave., which will subject the residents on the Pratt Ave. side of the building to road noise. The applicant has failed to meet design criteria 8 and the project should be denied.

**9. Whether the amount and arrangement of open space and landscaping are appropriate to the design and the function of the structures;** The amount and arrangement of open space and landscaping are not appropriate to the design and function of the structures. The visual impacts of this project cannot be properly mitigated by landscaping, due to the intensity of massing and height of the buildings, and the Applicant's request for a reduced setback from Pratt Ave. The PQP district includes the requirement for landscaping and screening.

"Screening" is defined as a "method of visually shielding or obscuring one abutting structure or use from another or from the public right-of-way by fencing, walls, berms or **densely planted vegetation**." Section 17.164.070 B.7 requires the proponent to submit a site plan showing the "location and size of existing and proposed planting and screening." Additionally, Section 17.68.060 B. provides "All planting strips, yards, setbacks and other required open space areas shall be landscaped in accord with a landscaping plan approved by the design review process." The Applicant's Landscaping Plan, shown in Drawing L2 of the Use Permit and Design Review submittal, the renderings of the front elevation of the 150 foot long, 36 foot tall Building B, which will be setback only 20 feet from Pratt Avenue, and the conclusion of the Vineyard Lodge Driveway Traffic Impact Report, Section E, regarding Sight Lines at the Vineyard Lodge Driveway, which states "Therefore, sight lines would be acceptable assuming that **no** landscaping is planted along the site frontage that would ultimately grow and block drivers

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views." are in contradiction with one another in the appropriate screening required by the Code. Additionally, the stand of American Sycamore trees, located along the northeast property line and proposed to screen the 162 foot long, 40 foot tall Building A, are deciduous and will not provide adequate screening of Building A particularly during the Fall and Winter months. The massing and height of the proposed dormitory buildings, combined with the requested front setback variance of 20 feet from Pratt Ave. and the stated traffic safety concern upon exiting the driveway, should landscaping be planted along the front of the property, renders the Applicant's Landscape Plan, Mitigation Measure (AES-1) ineffective and failing to meet Design Criteria 9 and, therefore, the project should be denied.

**10. Whether sufficient ancillary functions are provided to support the main functions of the project and whether they are compatible with the project's design concept;** There are several ancillary functions to support the main function that are lacking: parking; gathering space, green space, recreation area, and inadequate access drive for fire safety. (Some of these are discussed in more detail in other sections so will not be repeated here). The applicant has failed to meet design criteria 10 and therefore the project should not be approved.

**11. Whether access to the property and circulation systems are safe and convenient for pedestrians, cyclists and vehicles;** The preliminary grading and drainage plan that was provided on page UP4 of the plans (Page 113 of Appendix 4 of IS/MND) notes that the width of the access road is 16' in some places. Section 17.124.070 B. 1. provides that *"An access drive is a way located outside of the public right-of-way that provides vehicular access between the public street and the required parking for more than one lot, or for one lot if the length of the drive is greater than one hundred (100) feet."* The access drive in the Applicant's plans is greater than 100'. Section 17.124.070 B. 2. e. provides the following widths are the minimums that will allow for the safe passage of emergency vehicles. According to this Code Section, for residential developments having over 60 units, the minimum width (including two 2' shoulders) is 30'. Since the access roads for the proposed plans do not meet the minimum Code requirement for width, the project should be denied. Width of access roads are provided as minimums for safety of residents and should be strictly enforced. A reduction in the size of the access roads, contrary to the Code provisions, could result in future liabilities for the City. Section 17.124.070 B.2.a provides: *"All access drives shall be designed for two-way traffic, unless specified approval is obtained from the public works director and fire chief/fire code official to allow one-way access drives."* (Verification of approval of the fire chief should be obtained). Section 17.124.070 B.2.h. provides: *"An adequately sized firefighting operational area shall be provided as required by Chapter 15.36"* This required firefighting operational area is not evident on the plans and should, therefore, be verified. The Applicant has failed to meet design criteria 11 and, therefore, the project should be denied.

#### USE PERMIT FINDINGS:

The Findings required for a use permit are set forth in Section 17.168.050. as follows: ***"No use permit shall be granted unless all of the following general findings can be made:"*** This provision clearly states that if any one of these factors is not satisfied, "no use permit shall be

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granted." This project fails to meet Section 17.16.050 A., B., C., D., E., F., G., H., I., J., K., and L., as follows, and should, therefore, be denied:

**A. That the proposed use would not generate odors, fumes, light, glare, radiation or refuse that would be injurious to surrounding uses or to the community;** Due to the large size of the project, the number of students, the number of cars, and the outdoor lighting, this project will generate odors, fumes, and light glare that will be injurious to surrounding uses of residential homes. In addition to existing nearby residences, there are two planned residential building sites located directly across from the proposed project site. The Applicant has failed to meet finding A. and should, therefore, be denied.

**B. That the proposed use would not generate levels of noise that adversely affect the health, safety or welfare of neighboring properties or uses;** The proposed project will increase the total number of students from 101 to 224 in a very concentrated area. The Applicant's submitted Noise Study states, "*Gatherings could include up to 120 students who would live on the site. Residential neighbors near the project site have expressed concern that these gatherings and other activities could generate noise.*" The Noise Study only contemplates 120 people speaking at the same time at an outdoor event. Numerous unanswered questions and unintended consequences arise, with respect to noise, when the other 104 residents have to be accounted for when participating in an outdoor event. A second statement in the Noise Study, "Student activities are not expected to result in noise that can be heard at the property line between the hours of 10:00 p.m. and 7:00 a.m." The Noise Study did not take into account the proximity of the two residential building sites located directly across the street from the Vineyard Lodge site. Notwithstanding the existing rules prohibiting outside amplified music, the observance of a 9:30 p.m. curfew, and non-residents not allowed to attend events, the idea that 224 college students will not generate an increased level of noise, at any hour, that exceeds the normally acceptable range is beyond credulity. Until proven otherwise, the Applicant has failed to meet the standards of use permit finding B and the project should be denied.

**C. That the proposed use would not generate traffic noise in excess of the normally acceptable range identified in the general plan;** The increase in traffic noise from the operation of 72 cars located onsite at the Vineyard Lodge was not addressed by the Noise Study. Rather, the Noise Study was limited in focus to the A.M. and P.M. peak shuttle bus trips to and from the Vineyard Lodge/Greystone. The Noise Study was conducted during a period when the Vineyard Lodge was unoccupied by students<sup>4</sup>, therefore, no student car derived noise was measured and included in the calculations to ascertain if the proposed 72 permitted cars will generate traffic noise in excess of the normally acceptable range. The Applicant has failed to adequately address use permit design criteria C and the project should be denied.

**D. That the proposed use would not make excessive demands on the provision of public services including water supply, sewer capacity, energy supply, communication facilities, police protection and fire protection;** The proposed project could potentially make excessive

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demands on the municipal water supply and municipal sewer capacity as well as other public services. The Applicant's request to expand student enrollment from 200 to 300 students will be adding 100 people to our community. The Association of Bay Area Governments ("ABAG") projection that St. Helena's population will increase by 400 by 2040 does not include these additional 100 students. With a focus on managed residential growth in the City of St. Helena, the City's Residential Growth Management System limits growth in order to ensure the City can provide adequate public services and infrastructure. The proposed Vineyard Lodge expansion project is not exempted from the Residential Growth Management System, Section 17.152.040.<sup>5</sup> Given the scarcity and rising rates of the City's potable water supply and the tenuous condition of the municipal sewer system, the Applicant should not be granted a use permit based on the theoretical future demands of water allocation and wastewater discharge volumes. Notwithstanding the reported water allocation offsets of the proposed project, the Applicant's Water Availability Analysis reports historical annual water usage that has exceeded its corresponding annual water allocations. There is no certainty that the Applicant's proposed redistribution volumes will not exceed water allotment in the future. Similarly, with respect to wastewater discharge volumes, the Vineyard Lodge project is theoretically projected to increase from 6373 gpd to 9520 gpd (an increase of 49%) and the onsite equalization pump tank is sufficiently sized to allow for only off-peak discharge to the City sewer. Again, notwithstanding any theoretical wastewater offsets anticipated at the Greystone campus, the unintended consequences of increased wastewater discharge from the expanded Vineyard Lodge project have not been fully contemplated, as a function of future development, in the area of the City served by the Crinella Lift Station. In consideration of the limited public services of the City, the Applicant's requested increase in enrollment from 200 to 300 students, combined with the proposed expansion of the Vineyard Lodge project to house these additional students, as compared with the higher benefits of other market rate and affordable residential projects competing for the same limited resources and building permit allocations, is not supported and the use permit should be denied.

***E. That the proposed use would provide adequate ingress and egress to and from the proposed location;*** The project has failed to provide adequate ingress and egress to and from the proposed location and should be denied. (See previous discussion under Design Review Criteria 11, above.)

***F. That allowing the proposed use would not conflict with the City's goal of maintaining the economic viability of a local-serving economy;*** The proposed project will conflict with the City's goal of maintaining the economic viability of a local-serving economy. Revenue generation is a key factor for St. Helena. The City is facing major challenges with regard to economic development. These challenges include, but are not limited to, the constrained capacity of local infrastructure, lack of available water supply and associated rising water rates and increasing traffic volume. The Applicant's request to increase enrollment from 200 to 300 students and increase the Vineyard Lodge housing capacity does not support increased local economic development. The Applicant has moved the majority of its tourist focused, revenue generating activities and services to the new Copia center in the City of Napa. The Greystone

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campus will become more student education and less tourist activity oriented. As a result, St. Helena will be allocating a portion of its finite infrastructure resources without any increased economic benefit. On the contrary, if these same limited infrastructure resources are allocated to higher economically beneficial uses (i.e. hotels, restaurants, ancillary supporting businesses) the City's local-serving economy and long-term economic sustainability will be greatly enhanced. The Applicant's proposed project presents a conflict to the goal of maintaining the economic viability of a local-serving economy and the use permit request should be denied.

**G. That the proposed use would be compatible with surrounding land uses and would not conflict with the purpose established for the district within which it would be located;** The proposed use is in conflict with the surrounding land uses and would conflict with the purpose established for the district within which it would be located. Since surrounding properties are agricultural and residential, the proposed use is clearly in conflict. (See discussion under Design Review Criteria 5, above.) The Applicant has failed to adequately address use permit finding G and the project should be denied.

**H. That the proposed use would not be in conflict with the City's general plan;** The proposed use is in conflict with the City's general plan. (See discussion under Design Review Criteria 1, above) and should be denied.

**I. That the proposed use would not be injurious to public health, safety or welfare;** The proposed use would be injurious to public health, safety or welfare. (See discussion under Design Review Criteria 8 and 11, and Use Permit Findings A, B, and C) and should be denied.

**J. That granting the use permit would not set a precedent for the approval of similar uses whose incremental effect would be detrimental to the City or would be in conflict with the general plan;** The granting of this project would set a precedent for the approval of very large three story buildings. I do not believe there are any other three story buildings, beyond the central business district, in the City of St. Helena. Allowing a three story, 40'2" tall building outside the Urban Limit Line will set a dangerous precedent. If the variance is allowed to the special Pratt Ave. setback, precedent will be set to allow variances along the entirety of Pratt Ave. Additionally, precedent will be set to allow variances to other special setbacks on other connector streets. These precedents would be detrimental and, therefore, the use permit for this project should be denied.

**K. That, as demonstrated on a detailed plan submitted by the applicant, adequate off-street parking to accommodate the long-term parking needs of employees and business owners and customers is available;** The applicant has failed to provide for adequate off-street parking. Section 17.68.060, related to PQP standards and requirements, provides *on-site parking and loading shall be provided in accord with the provisions of Section 17.124*. Section 17.124.030 A. 3. sets forth the required number of parking spaces for "rooming, boarding, or lodging house as: two spaces for the resident owner plus one space for each guest room." Applicant is required to provide for a minimum of one space per room. The Applicant is proposing to increase student occupancy from 101 to 224 while decreasing parking spaces from 85 to 72. The Applicant is adding 123 students and decreasing parking spaces by 13. This proposal is

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based on the Applicant's contention that the current student parking demand at the Vineyard Lodge site is 31%. During the performance of the Traffic Impact Report, parking demand was counted at 44%. Further, the reported student parking demand at the Greystone Campus is 70% (TIR). This wide discrepancy in student parking demands is in contradiction with the Applicant's request for a variance of the parking requirements. Rather, it appears the basis for the Applicant's request for 72 parking spaces is based on the limitation in available remaining space due to the large building program on the property. Section 17.124.50 A. makes it very clear that an expansion or increase in occupancy can be made "*provided that **additional parking space shall be provided** in the extent of the change as required in Section 17.124.030.*" The Code language "shall" appears to be a mandate that changes in projects, such as this, must provide for additional parking. The proposed project has failed to meet minimum parking standards as required by the Code and should be denied.

***L. That the capacity of surrounding streets is adequate to serve the automobile and delivery truck traffic generated by the proposed use. Design Criteria (Zoning Code 17.164.030).*** The intersection of Pratt Avenue and Main Street is a major entry/exit point for the City of St. Helena. The City should take upmost precaution in approving projects that could potentially impact the traffic along the entire stretch of Main Street. The traffic impacts of the Los Alcobas property have not been fully realized and Beringer has proposed a project that will also have traffic implications. The City should proceed with great caution and insure that the traffic impact studies submitted by the Applicant are to the level that would be required by an Environmental Impact Report.

**ZONING DESIGNATION:**

The property on Pratt Ave. is zoned PQP. The original zoning was A-20 and changed to PQP in 2008 to accommodate the non-conforming dorm expansion. Chapter 17.68 of the Code sets forth the provisions related to PQP zoning. Section 17.68.010 A. states "*It is the purpose of the PQP public and quasi-public district to provide for government-owned facilities, public and private schools and quasi-public uses such as churches and cemeteries.*" The PQP zoning provisions do not seem to contemplate housing. The 2008 Planning Commission may have improperly zoned the property to PQP to allow for dormitories. If this is the case, the mistake of the improper zoning should not be extended further and additional dormitories on this property should not be allowed.

**ENVIRONMENTAL IMPACT REPORT:**

It seems evident that there is sufficient grounds to deny this project on the basis of design review and the failure to meet the requirements of a use permit. Since the project cannot pass on design review and use permit, the issue of requiring an Environmental Impact Report becomes irrelevant. In other words, the Applicant should not be required to perform an EIR if the Planning Commission determines that it is not able to approve the project based on design. In the event the Planning Commission does consider the necessity of an EIR, it is clear that an

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EIR is required for this project for the following reasons: Identification and mitigation of multiple significant impacts of this project have not been met.

#### **ALTERNATIVE HOUSING OPTIONS:**

Based on the numerous variances required and non-compliance with multiple Code provisions and design review standards, it is clear the proposed project does not work on the Vineyard Lodge site. Although it is not the role of the Planning Commissioners to instruct applicants as to how or where to design their projects, the CIA owns other properties in the area that may be more suitable for housing additional students. In 1993, the St. Helena Planning Commission approved plans for two dormitories on the CIA Greystone property. Another property owned by the Applicant is a 5.49 acres parcel located adjacent to the Greystone campus to the south. Locating additional dorms on either the Greystone campus or the property adjacent to the Greystone campus would have much less impacts in the community in terms of visual, parking, traffic, etc. than the proposed project. Another consideration is that Pacific Union College is currently under-enrolled and the dormitories are not at full capacity. Entering into an agreement with Pacific Union for housing additional students would have far fewer impacts than the proposed project and may be economically more beneficial to both PUC and the CIA.

#### **NEIGHBORHOOD MEETING:**

A neighborhood meeting was held on April 2, 2016. This meeting was noticed by the City Planning Department and was attended by Tom Bensel, Victor Carniglia (on behalf of the City) and several concerned neighbors. It seems as if this meeting was purely to “check a box” that the Applicant met with neighbors. Various questions and concerns were raised by the neighbors in attendance. Based on the plans submitted, the Applicant did not address any of the concerns raised at the meeting. Three of the concerns I raised related to the height of the buildings, the proximity of the buildings to Pratt Ave. (set back), and whether there would be sufficient off-street parking so that no overflow parking would occur on Pratt Ave. A follow up meeting was not held and I was never contacted by Tom Bensel again. When I saw the plans that were submitted to the City, it became very clear to me that the Applicant not only failed to address our concerns, but actually went in the opposite direction of the concerns expressed at the meeting. At the neighborhood meeting, the representation was made that the buildings would be two story. In spite of the fact that I expressed concern over the height of the buildings, the submitted plans include buildings that are three stories tall and 40’2” high. At the neighborhood meeting, I specifically asked how far back the buildings would be setback from Pratt Ave and stated that I felt they should be set back as far as possible. The applicant replied at the meeting that he did not know how far the buildings would be set back. When I saw the submitted plans, I was very disappointed to see that the setback from Pratt Ave. was proposed at 20’ and would require a variance from the special setback that applies to Pratt Ave. As to the question of sufficient parking, the design decreased parking by 13 while increasing the

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number of students by 123. Again, there is a feeling that the applicant only held this meeting to “check a box” and not to sincerely address the concerns of the neighbors.

**MERIT BASED DECISION:**

The CIA has voluntarily decided to purchase the COPIA building in the City of Napa for a reported \$12.3 million, plus renovation investment, and to relocate many of their tourist activities to the City of Napa. This reference to moving tourist activities is made throughout the IS/MND. As an example of the tourism activities moving to the City of Napa, the Flavor Napa Valley website (a large CIA event) lists hotel packages for tourists planning their stay for the event. All of the hotel packages are in the City of Napa.<sup>6</sup> What about St. Helena? There have been recent newspaper articles (San Francisco Chronicle and Napa Valley Register), quoting Tom Bensel, related to the opening of Copia. These newspaper articles are attached for your convenience. Some of the more relevant quotes from these articles are: *“The Culinary Institute of America is opening its newest campus, at the Copia building in Napa, in stages, beginning with classes this week. ‘This will be the public face of the CIA,’ said Tom Bensel, managing director for both Napa Valley campuses, including the original site at Greystone in St. Helena.”*<sup>7</sup> *“The opening of the Copia building allows the Greystone St. Helena campus to focus on education for the students and also to undertake much needed renovations, Bensel said.”*<sup>8</sup> In another article discussing the opening of the new Copia center in Napa: *“Tom Bensel, managing director of the institute’s California campuses, says it will increase the recreational cooking classes offered at St. Helena and move them to Napa.”*<sup>9</sup> The CIA has chosen to redirect the majority of its tourist revenue generating operations from St. Helena to the City of Napa and is now asking St. Helena to approve a project that will place additional burdens on the City’s infrastructure and finite resources. The proposed project does not meet the standards required for design review or for a use permit. The CIA has submitted this project, without regard for the comments and concerns of the neighbors, without deference to Municipal Code provisions, and without completing a full Environmental Impact Report which would clearly define all environmental impacts. It is incumbent upon the Planning Commission to make the determination of this project without regard for whom the applicant is, but rather, based on design review standards and use permit findings.

**CONCLUSION:**

There are multiple reasons this project should be denied. The proposed project fails to meet the design criteria required for approval of projects as set forth in Sections 17.164.030 A. 1., 2., 3., 5., 6., 7., 8., 9., 10., and 11. The proposed project fails to meet the requirements for a use permit set forth in Sections 17.16.050 A., B., C., D., E., F., G., H., I., J., K., and L. The proposed project also requires the granting of multiple variances that would be detrimental to the community and would set negative precedents for future projects. While there are multiple significant reasons this project fails to meet design review standards and use permit standards,



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it only takes a finding of one reason of the many outlined above to deny this project. For the reasons stated throughout this paper, this project should be denied.

## Footnotes:

<sup>1</sup> Rusty and Donna Hinds own a 1 acre property (777 Pratt Ave.) that is diagonally across the street from the CIA Dorm project. This property was purchased as a residential homesite. The Vineyard Lodge property is less than 50 feet from this property. Additionally, Rusty and Donna Hinds own a 1/3 acre property (1057 Pratt Ave.) this is located between the Vineyard Lodge project and Main Street.

<sup>2</sup> Applicant describes building heights as 29' to 40'2" (Page 4 of IS/MND) but buildings heights are typically measured at the highest point. If measured at the highest point the buildings range from 36' to 40'2".

<sup>3</sup> In the chart on P. 6 of IS/MND Off-site Beds are not stated as "N/A." Applicant has not discussed offsite housing.

<sup>4</sup> P. 9 IS/MND states "The existing CIA facility was unoccupied as students were on break."

<sup>5</sup> **17.152.040 Exempted and regulated development categories.**

A. Exempted Development Categories. This chapter shall not apply to the issuance of building permits for the following projects:

1. Industrial;
2. Commercial;
3. Commercial/residential (daily rental);
4. Replacement housing (on the same site as a preexisting unit which has been removed, demolished or burned within the immediately preceding two years) but not in conjunction with subsection (A)(5) of this section;
5. Relocation of units already existing in the city;
6. Additions, renovations and refurbishment of existing dwelling units;
7. Accessory buildings of any type (except dwelling units);
8. Guest cottages (detached bedroom(s) without kitchen facilities);
9. Second units as defined in Section 17.04.160 and regulated by Section 17.116.030;
10. Affordable Housing. Affordable units are those dwelling units which are required to be rented at affordable rents or purchased at an affordable sales price, consistent with Chapter 17.146. The number of affordable housing units constructed shall be determined by the city council at the time of review of the development agreement authorizing the units. The agreement shall contain guarantees that the dwelling units would continue to be affordable to persons of very low, low, or moderate income for an agreed upon period of time.

<sup>6</sup> [www.flavornapavalley.com](http://www.flavornapavalley.com). Click on "Events"; then Click on "Hotel Packages";

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<sup>7</sup> CIA at Copia opens in Stages. Sasha Paulsen, Napa Valley Register, October 18, 2016 (article attached)

<sup>8</sup> CIA at Copia opens in Stages. Sasha Paulsen, Napa Valley Register, October 18, 2016 (article attached)

<sup>9</sup> Napa's Copia to reopen as Culinary Institute of America campus, Tara Duggan, San Francisco Chronicle, October 16, 2016 (article attached)



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# CIA at Copia opens in stages

Sasha Paulsen [spaulsen@napanews.com](mailto:spaulsen@napanews.com) Oct 18, 2016



Phil Mansfield photo  
Food and wine classes are now being offered at the Napa Valley Vintners Theater at the CIA at Copia in Napa.

The Culinary Institute of America is opening its newest campus, at the Copia building in Napa, in stages, beginning with classes this week.

"This will be the public face of the CIA," said Tom Bensei, managing director for both Napa Valley campuses, including the original site at Greystone in St. Helena.

Leading a tour through the Copia building, where renovations are ongoing, Bensei gave an overview of the plans as they are evolving for the space. When completed it will offer classes and food and wine programs for the public, extensive event space, a "lifestyle" shop, and a restaurant with a new

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approach to dining. There will be no entrance fee to the building, and Bensei stressed that the CIA wants to welcome both local residents and visitors to the facility when construction is complete. There will be fees for individual classes. He said a grand opening is planned for 2017.

The Vintners' Hall of Fame, now in the Barrel Room at the historic Greystone building will be relocated to Copia and renamed the Wine Hall of Fame, Bensei said. It's expected to be in place by spring 2017.

"CIA at Copia is a first for the Culinary Institute of America," he said, noting that the new facility will be "entirely dedicated" to offering food and wine education and experiences to the public. "It opens a window into what the CIA truly is: a visionary thought-leader and innovator in food and beverage, with world-class faculty and facilities."

The opening of the Copia building allows the Greystone St. Helena campus to focus on education for the students and also to undertake much needed renovations, Bensei said.

The CIA at Greystone opened 20 years ago in what had been the Christian Brothers Winery. Initially, it offered a pastry and dessert training, as well as specialized educational classes for chefs. Over the years, as public interest has grown in cooking programs, the CIA began offering classes for food and wine enthusiasts, and expanded its professional training programs.

The 80,000 square-feet of indoor and outdoor event and theater space at Copia will now be the site for daily programs, wine tasting and classes taught by CIA instructors and guest lecturers that feature seasonally-themed recipes designed for home kitchens.

Beginning on Monday, Oct. 17, the CIA is offering daily food and wine programs in newly named Napa Valley Vintners Theater, formerly the Meyer Food Forum. The 72-seat theater is equipped with a demonstration kitchen. The first classes include "Basic Flavor Interactions," "Cooking With Wine," "Fresh Home-made Cheese" and "How to Make Fresh Pasta."

Sundays have been designated "Family Fundays" beginning with an Oct. 23 class "Mac and Cheese," which will "re-imagine" the classic.

A complete schedule with tickets and prices is available at <http://ciaatcopia.eventbrite.com>.

"CIA at Copia's educational programming takes our enthusiast programming to another level, for people of all ages and interests," Bensei said.

#### The Restaurant at CIA Copia

The anticipated opening date for The Restaurant at CIA Copia is mid-November. What was once Julia's Kitchen at Copia has undergone a face-lift for the new restaurant, which will be open for lunch and dinner, under the direction of Walid Malouf, CIA's senior director of food and beverage operations, and chef de cuisine Chris Aken.

Malouf, who is based at the CIA in Hyde Park, N.Y., told the Register that the plan for dinner service is to blend front and back of the house service for an innovative approach to service in which chefs will come out of the kitchen to offer dishes to diners. In this way, he said, guests will be able to see both the savory and dessert dishes and also meet the chefs who create them. Sharing dishes will be encouraged as part of this "experiential dining" approach. Dishes diners select will be marked on the menu, and the number of dishes selected will be tabulated at the end of a meal.

In the same way, Malouf said wines by the glass will be offered on a cart that will move through the restaurant. Guests will be able to taste as many as six wines before selecting one or more to drink with their meal.

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Lunch service will be more conventional, Malouf said. "People will be able to come in and order a burger or salad — usually that's when people are on a schedule."

Malouf described the menu as Mediterranean-inspired, California cuisine "with international influences." Produce from the Copia gardens, managed by CIA Farm Manager Matthew Gunn will be utilized.

The remodel of the original Copia building by CIA and Architectural Resources Group has extended the facade nearly eight feet from its original location, allowing the dining room to blend with the property's patio, gardens and olive grove. The restaurant has one private dining room that seats 12, and two private dining rooms that each seat 18, but can be combined to seat 36.

A 1975 graduate of the CIA, Malouf joined the administration of his alma mater in 2013. Before that, he spent 13 years as co-owner and chief operating officer of Beacon Restaurant in New York City. Malouf is known in the New York area for his time as executive chef and director of operations at the Rainbow Room and executive chef at the Hudson River Club and Le Cremaillere.

The signature cuisine he developed at the Hudson River Club featured the culinary riches of the Hudson Valley, which resulted in "The Hudson River Valley Cookbook" (Addison-Wesley, 1996). Malouf is also the author of "High Heat: Grilling and Roasting Year-Round" (Random House/Broadway Books, 2005).

He co-founded the Windows of Hope Family Relief Fund after Sept. 11, 2001 and remains one of the organization's three directors. He is also a former chairman of the CIA's Alumni Council and served on the college's Education Committee.

Aken has worked as executive chef at Avia Napa (now Andaz) and was opening executive chef at AKA Bistro. The former owner of Toast Catering, executive chef and partner at Jack London Lodge and Stomp at the Mt. View Hotel. Originally from Southern California, Aken began his culinary career in Oklahoma City in 1995 under Chef Kurt Fleischfresser and also worked at La Folie in San Francisco.

#### Event space

Other renovations at the new CIA include windows on the lower level opening out to the river, creating a light-filled, modern atrium in the center of the building that will be available for evening receptions and can accommodate 800 guests in a standing reception or a 350-seat dinner.

Upstairs, the former exhibit hall is being turned into a teaching kitchen for hands-on cooking classes. Bensen said the plan is to have it completed by late summer 2017.

A mezzanine overlooking the atrium and the Napa River can host an event for up to 300. Adjacent to the mezzanine are two classrooms that can be used for breakout sessions, each seating 30. Outside, the newly terraced amphitheater seats 600 in rows or 375 at tables.

Meeting spaces upstairs at CIA at Copia include the Food Business School classroom with 25 seats; the boardroom with 25 seats, reception space for 50 on the balcony and a garden balcony that will accommodate 80 seated and 120 standing.

The main theater at Copia, used for movie screenings, speakers' series, and panel presentations, seats 250.

For private event bookings, contact Amy Thomason-Richardson at 707-967-2307. For additional information, visit [www.ciaatcopia.com](http://www.ciaatcopia.com).

Food

## Napa's Copia to reopen as Culinary Institute of America campus

By Tara Duggan, San Francisco Chronicle | October 16, 2016 | Updated: October 16, 2016 5:00am

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Photo: Talia Herman

The renovated restaurant at Copia in Napa, now part of the Culinary Institute of America.

Just after Halloween, Copia will rise from the dead in downtown Napa.



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Drought-starved grapevines from its old garden have been pulled up and replaced by robust olive trees along the walk that leads to the former Copia: The American Center for Wine, Food and the Arts. The site will now be the CIA at Copia, a new public-facing campus for the Culinary Institute of America. When it opens in stages, starting in November, the CIA at Copia will have a renovated restaurant and store and will offer cooking demonstrations and wine tastings. Next year, it will open an exhibit space and offer hands-on cooking classes to nonprofessionals.



It's a big turnaround for the museum and event space, which first opened in 2001 with grandiose plans dreamed up by the late Robert and Margrit Mondavi, who were also major benefactors, and supporter Julia Child. But it closed and went into bankruptcy in 2008. Since then, its 80,000 square feet of exhibit halls, classrooms, theaters and a restaurant as well as an outdoor amphitheater have been largely empty.

The Culinary Institute of America, which is headquartered in Hyde Park, N.Y., and has had a branch at Greystone in St. Helena for 20 years, bought the property in October 2015 for \$12.5 million, a bargain compared to its original \$55 million price tag.

This will be the first branch of the institute that is oriented toward the public rather than professional cooks. Tom Bensen, managing director of the institute's California campuses, says it will increase the recreational cooking classes offered at St. Helena and move them to

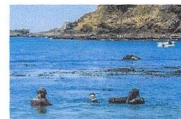
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Napa.

“We want to start being a leader in how people perceive food and health and sustainability,” says Bensel. “It’s a great platform for us to be able to speak to the public.”



Photo: Talia Herman

IMAGE 1 OF 9

The restaurant at the new CIA at Copia in Napa.

Based on experiences at its other campuses, including in San Antonio, Texas, and nine public restaurants and bakeries, the institute is betting its mix of tastings and classes will have more traction than what was offered at the original Copia.

“People want to taste things, touch things and have an experience,” Bensel says. “They’ll be



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able to immerse themselves with what's going on rather than just observe.”

Copia's original exhibits are gone, but the new space will house Chuck Williams' personal collection of cookware — bequeathed to the school when the founder of Williams-Sonoma died in December. When the exhibit opens in late spring or summer, entry will be free, and Bensel makes pains to say it won't be called a museum.

The new owners “have heard all of the horror stories about what occurred and what they can improve upon,” says Steve Carlin, who developed the Ferry Plaza Marketplace and the similar Oxbow Public Market, which opened in 2007, right next to Copia. “From what I've seen, they have listened to that and will make the appropriate adjustments.”

During the first phase next month, the institute will start to offer daily food and wine demo classes (\$25 to \$95) in a 75-seat theater. A bit later, six tasting stations will be set up in the atrium with visiting wineries that will rotate quarterly.

“This gives an opportunity to many wineries that don't have tasting rooms,” says Bensel. There are also plans for a high-end wine salon to be located next to the restaurant. It will offer small pours of cult wines that would otherwise be difficult to taste.

The restaurant, called the Restaurant at the CIA Copia, is inspired by the cart-style service at San Francisco's State Bird Provisions. Especially at dinner, the cooks will bring out trays with dishes that diners can choose from and are meant to be shared, such as a whole roast trout, duck and foie gras served with onion marmalade, and roasted oysters with shallots and verjus.

“We really want the restaurant to be fun and casual,” says Waldy Malouf, who heads up food and beverage operations at the institute.

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Photo: Talia Herman

A classroom kitchen in the new Culinary Institute of America campus at Copia in Napa.

While the restaurant at Copia will have a professional staff, the one at Greystone will be student-run, and closed when school is not in session.

Bensel says the new campus is part of the evolution of the culinary institute, from which he graduated in 1976. Back then, the culinary arts were considered more of a trade. Over the years the institute has gone beyond its associate degree programming to offer bachelor of arts degrees, and now a Wine and Beverage Graduate Certificate Program at Greystone.

The CIA at Copia also plans to be part of an ongoing evolution in downtown Napa. Copia closed during the Great Recession, and when a renovation to the nearby bypass channel was diverting traffic from the neighborhood. Things improved by 2010, developer Carlin says, and sales at Oxbow Public Market have since tripled. New hotels have opened, with additional ones due to open soon.

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At the original Copia, many say, another problem was a lack of involvement in the community.

“Whether it was intentional or not, there was a sense of exclusivity to it,” Bensel says. The CIA at Copia is trying to avoid that by hosting events and fundraisers, like one for Friends of the Napa Valley River that was held at its outdoor amphitheater last weekend.

If the new campus is successful, Bensel says, revenue will bolster its academic programming. And there’s one last side benefit to educating the public about food and wine: “Our graduates are going out and being part of successful restaurants,” he says. “We don’t want to just give them their certificates and be done.”

*Tara Duggan is a San Francisco Chronicle staff writer. Email: [tduggan@sfchronicle.com](mailto:tduggan@sfchronicle.com)  
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**Tara Duggan**  
Food Reporter

## **COMMENTS OF RUSTY HINDS TO CULINARY INSTITUTE OF AMERICA CAMPUS MASTER PLAN**

### **Historical Review**

A review of the historical record of the establishment of the CIA Greystone Campus, and its resident housing chronology, is very important in setting the context of this current proposal being made by the CIA.

- 1993: Original Use Permit approves the construction of two residential dormitories and stipulates a third, with Permit amendment, to be constructed on the Greystone Campus. The CIA requested enrollment of 200 students but a maximum permit limit of 104 students was granted. The Permit required a 1:1 room to parking space ratio. The City Council certified a Final Environmental Impact Report.
- 2004: CIA is granted a Use Permit to transform the former Marlinda Nursing facility to student housing. This property is located at 830 Pratt Avenue, beyond the Urban Limit Line, and was zoned A-20. The Planning Commission and City Council approved the transition based solely on a non-conforming replaced by a use of lesser intensity (Occupancy reduced from 70 beds to 40).
- 2008: CIA requested a change in the Vineyard Lodge Use Permit to add a second dormitory. As this would trigger non-conformance of greater intensity in the A-20 zone, the Planning Commission and City Council struggled with the dilemma of either changing the citywide zoning ordinance for A-20 or the site specific rezoning of the Vineyard Lodge parcel. After much debate, the Vineyard Lodge parcel was rezoned Public Quasi Public. Vineyard Lodge II was erected and houses 60 residents in 12,612 square feet. The Vineyard Lodge total resident population is 101 served by 85 parking spaces. In addition, resolution 2008-74 increased the enrollment at the Greystone campus from 104 to 200 students.

### **Summary (Hinds)**

In review of the Initial Study/Mitigated Negative Declaration ("IS/MND"), and associated documents submitted by the Culinary Institute of America ("CIA") for the proposed expansion of the Vineyard Lodge located at 830 Pratt Avenue, several elements either require the granting of multiple variances to the City of St. Helena Municipal Code or they do not satisfactorily identify and mitigate all of the potentially significant impacts. My comments will focus primarily on the high intensity (massing and height) of the new buildings, their forward location on the site near Pratt Avenue (requiring a front setback variance), the inadequate number of parking spaces (requiring a variance), the potential increase in noise, the potential increase in traffic, the increase in wastewater generation, the potential increase in water usage above the allocated volumes and the significantly incongruous nature of the project with the surrounding agricultural and residential land use.

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As such, the City of St. Helena Planning Department, the Planning Commission and the City Council should deny the proposed expansion of the Vineyard Lodge property. The Applicant has less environmentally impactful alternatives to fulfill its requisite student housing needs at its Greystone Campus, and adjacent owned parcel, which date back to the original 1993 Use Permit.

### **INITIAL STUDY/MITIGATED NEGATIVE DECLARATION (Vineyard Lodge Expansion)**

In an effort to assist the reader, I have structured the following presentation of the analysis of the Initial Study/Mitigated Negative Declaration ("IS/MND") and Appendices in the following order:

- Cite the category of environmental factor potentially affected;
- Applicant's presentation of the Potentially Significant Impact, either properly identified, or improperly characterized as Less than Significant;
- Presentation of the Applicant's Impact Analysis, as presented;
- Presentation of the Applicant's proposed Mitigation Measure(s) associated with the environmental factor;
- Presentation of Hinds' rebuttal of the manner in which the Applicant has failed to either properly characterize or mitigate each of the environmental factors which create a Potentially Significant Impact; and
- Page numbers are listed parenthetically to assist the reader in reference to where each issue is found in the IS/MND.

#### **Aesthetics:**

##### **Potentially Significant Impacts (IS/MND Page 12)**

- Substantial adverse effect on a scenic vista
- Substantially degrade the existing visual character or quality of the site and its surroundings

##### **Impact Analysis (IS/MND Pages 13-15)**

- Residents and other viewer groups may experience reduced visual quality
- New dorms maximum height of 40'-2"
- Project will introduce perimeter parking lot lighting

##### **Mitigation Measure AES-1 (IS/MND Page 15)**

- Landscaping Plan - Vegetative screening (Trees). To be approved by Planning and Community Director prior to issuance of Building Permit

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**The Applicant has failed to adequately mitigate the impacts for Aesthetics for the following reasons:**

- High intensity massing (40,645 sq. ft.) and location of new buildings too close to Pratt Avenue;
- Maximum height of proposed buildings (36'-40'). Surrounding land use (A-20, greater than two acres has a maximum height limitation of 30'. Municipal Code 17.20.060);
- Visual Site Assessment performed in Summer 2016, during the period when onsite trees had full foliage;
- American Sycamore trees located on the northeastern property line along, "Vineyard Road, provide no screening in Fall and Winter months. Also, this same stand of trees will not provide adequate year-round height to screen the tops of proposed Buildings A and C (40');
- No existing screening on the eastern portion of the front property line on Pratt Ave. where proposed Building B (height 36') will be located;
- Existing trees on the western portion of the front property line on Pratt Ave. will not provide adequate screening of proposed Building B (36');
- Lack of trees to properly screen height of proposed Building C (40') looking eastward from western site boundary;
- The Applicant's Landscaping Plan (AES-1) does not mitigate the aesthetic impact resulting from the proposed project. Due to the large size of the buildings, mitigation cannot be accomplished by landscaping. Even with the addition of the landscaping proposed by the Applicant, the permanent visual impact of these buildings will be very significant and will detract from the beauty of the surrounding vineyard/mountain vistas;
- The Traffic Impact Report for the Vineyard Lodge driveway specifically contradicts the Applicant's landscaping plan by stating, "Therefore, sight lines would be acceptable assuming that no landscaping is planted along the site frontage that would ultimately grow and block driver views."
- This mitigation measure is not adequate for the proposed project and, with all due respect, should not be determined at the sole discretion of the Planning and Community Director, as proposed by the Applicant.

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**Land Use and Planning****Potentially Significant Impacts (IS/MND Page 38)**

- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

**Setting and Impact Analysis (IS/MND Pages 38-40)**

- The outer edge of the urban service area is demarcated by the urban limit line ("ULL") which is a parcel specific boundary that marks the limit of allowed urban development. The intent of the ULL is to discourage urban sprawl and promote sensitive development which preserves the rural and agricultural lands around the City. The proposed project is subject to land use policies outlined in the St. Helena General Plan (Guiding Policy 2.6.5 encourages the continuation of agricultural and **low-intensity** uses adjacent to the Urban Limit Line);
- The Vineyard Lodge Housing Site is located outside and adjacent to the ULL and is zoned Public Quasi Public ("PQP");
- The project is subject to other standard requirements, stipulated by the Zoning Code, namely, parking and setback requirements which, given site constraints, the applicant maintains cannot be met;
- Under Municipal Code 17.112.050, the Vineyard Lodge Housing site is subject to a special setback requirement of 36';
- In addition, the project has requested a variance from the parking standards outlined in Municipal Code Section 7.124.30 (A.3) which require two spaces for the resident owner and one space for each guest bed. Compliance with the Code will require 226 total parking spaces. Based on data supplied by the applicant, only 31% of students have a demand for parking spaces. As such, applicant is requesting a variance to allow for 72 parking spaces. To ensure that the number of available parking spaces equates with demand, applicant will cap the number of parking permits at 72 and will prohibit overnight offsite and street parking.

**Mitigation Measure LU-1 (IS/MND Page 40)**

- Requires at least five (5) on demand bicycles be made available to residents of the Vineyard Lodge Housing Site.

**The Applicant has failed to adequately identify and mitigate the impacts for Land Use and Planning for the following reasons:**

- Pursuant to Section 17.112.500.A of the St. Helena Municipal Code, there is a special setback of 36' on the northwest side of Pratt Avenue, from the railroad track to the Napa River. The reason this provision was included in the zoning code is evidenced by Section 5.3.3 of the Transportation Element of the 1993 General Plan (St. Helena's current

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governing General Plan) which provides, "Guiding Policies 5.3.3 Preserve rights-of-way for future collector streets within the planning area. The intent of the right-of-way preservation designation is to clearly define the interest of the City in maintaining the option for extending its collector street system into these areas. Special setback areas shall be established along collector streets to allow for future widening." In summary, the special setback on Pratt Avenue was established pursuant to the 1993 General Plan to allow for future widening due to Pratt Avenue being designated as a collector street. A variance to this special setback would be in direct contradiction of the General Plan and Zoning Code and would result in the loss of ability to widen Pratt Avenue in the future;

- The high intensity of the proposed Vineyard Lodge project (massing, height and building location near Pratt Avenue) is not consistent with the surrounding agricultural and residential land use (Municipal Code 17.168.050 G)(Municipal Code 17.164.030 A 3,5 and 8), the sensitive, low intensity development on parcels beyond the ULL (General Plan Guiding Policy 2.6.5) and the adjacent land use (A-20, greater than two acres) which mandates a maximum building height of 30 feet (Municipal Code 17.20.060);
- Applicant has not provided data demonstrating a strict 31% demand for onsite parking at the Vineyard Lodge Housing Site. The May 12, 2016, Vineyard Lodge Traffic Study (Dated November 2, 2016), references 96 student residents and 42 cars in the parking lot at the Vineyard Lodge (Demand ratio of 44%). The Greystone May 2016 traffic study (Table 7, Footnote 1, report dated November 17, 2016), references 45 students residing in the Greystone dormitory and parking demand is 70%. The Applicant's submitted documents clearly identify a significant parking demand discrepancy between student residents at the Vineyard Lodge (theoretical 31%, actual 44%) and Greystone (70%). The Applicant's requested parking variance should be denied and the required 1:1 ratio of beds to parking spaces should be required at the Vineyard Lodge;
- If Applicant wants to expand enrollment from 200 to 300 students, the Greystone and other Applicant owned sites should be evaluated to fulfill additional requisite housing and parking capacity requirements;
- The 1993 Use Permit (Resolution 93-105) approved the construction of two dormitories and allowed for a third dormitory, with Use Permit Amendment, on the Greystone Campus. "The CIA was previously approved to build two additional dormitories on the slope behind Greystone. The permits for those structures were not vested and have since lapsed." (Public Hearing Staff Report, August 28, 2008), This building site option remains as a viable alternative without the cumulative impacts of the Vineyard Lodge expansion project;
- The Greystone Campus has space to facilitate resident housing expansion, will eliminate the need for additional shuttle bus trips from the Vineyard Lodge and will not result in additional visual impact;



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- The Vineyard Lodge site is too small to expand the housing capacity from its current 101 to the proposed 224 student residents while maintaining compliance with the Municipal Code and General Plan of St. Helena. The Vineyard Lodge site is fully developed in its present state.

**Noise:****Potentially Significant Impact (Categorized Less than Significant, IS/MND Page 41)**

- A substantial permanent increase in ambient noise levels in the project vicinity above existing without the project.

**Setting/Impact Analysis (IS/MND Pages 42-44)**

- Noise study conducted on June 15, 2016. The existing housing facilities were not occupied as students were on break. The measured noise levels represent the lowest noise levels likely to be encountered in the area. Overall, the noise measurements indicate that the noise environment in the project area is generally quiet and consistent with the rural setting.
- At project operation, the onsite land use at the Vineyard Lodge, and associated noise environment, will continue to be typical of a multi-unit development (dormitories).
- The expansion of the Vineyard Lodge site is not expected to introduce a substantial permanent increase in the ambient noise environment.
- Gatherings could include up to 120 students who would live on the site.
- In addition, the CIA regulates activities at the Vineyard Lodge to prohibit amplified music outside, enforces a 9:30 p.m. noise curfew and prohibits non-residents from attending events on the quad.
- Student activities are not expected to result in noise that can be heard at the property line between the hours of 10:00 p.m. and 7:00 a.m.

**Mitigation Measure (Not Offered by Applicant)**

- Permanent noise was subjectively categorized as Less than Significant, therefore, no mitigation measure was offered.

**The Applicant has failed to identify and adequately mitigate the impacts for Noise for the following reasons:**

- The Noise Study was actually conducted in April-May 2016 while there were no students onsite at the Vineyard Lodge. As such, the results of the noise study are inaccurate since actual onsite student noise contribution was not measured and not considered for mitigation;

## Public Comment 16

- Key findings of the study were not predicated on the proposed 224 students residing at the Vineyard Lodge. The IS/MND states, "Gatherings could include up to 120 students that live onsite." Does this set a maximum outdoor activity limit of 120 students that live onsite? What about participation by the other 104 student residents?
- What is the compliance history of the CIA noise regulations including no amplified outdoor music, 9:30 p.m. curfew and prohibition of non-resident attendance? The CIA should be specific as to what means and by whom are these prohibitions enforced. The CIA should state the policy for violating any of these stated prohibitions.
- The Applicant should be required to address the increase in traffic noise resulting from the increase in number of permitted student cars from the reportedly 31 to 72?
- Applicant's statement, "Student activities are not expected to result in noise that can be heard at the property line between the hours of 10:00 p.m. and 7:00 a.m." is simply not believable. The proposed expanded Vineyard Lodge is a multi-unit college dormitory that will house 224 students with all parking located on the perimeter of the site. College students keep late hours and are typically loud.
- The Noise Study did not contemplate the effect of noise emanating from the Vineyard Lodge toward the two residential building sites located directly across Pratt Ave.

**Population and Housing:****Potentially Significant Impacts (Categorized Less than Significant, IS/MND Page 45)**

- Induced substantial population growth in an area.

**Impact Analysis (IS/MND Page 45)**

- Project construction activities at the Vineyard Lodge Housing site would result in a maximum occupancy of 224 students onsite, which equates to a net increase of 123 students.

**Mitigation Measure (Not Offered by Applicant)**

- Population Growth was subjectively categorized as Less than Significant, therefore, no mitigation measure was offered.

**The Applicant has failed to adequately identify and mitigate the impacts for Population and Housing for the following reasons:**

- The increase in resident student population from 101 to 224 is concentrating 123 additional students at the project site.

## Public Comment 16

- Notwithstanding the PQP zoning of the site, this significant increase in residential density is not consistent with the surrounding agricultural land use and scenic surroundings (Municipal Code 17.168.050 G)(Municipal Code 17.164.030 A 3,5 and 8) and is in conflict with the General Plan guiding principle (2.6.5) of sensitive development on parcels located beyond the ULL.

**Transportation/Traffic:****Potentially Significant Impacts (IS/MND Page 48)**

- Conflict with applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths and mass transit?

**Impact Analysis (IS/MND Page 50)**

- With the project, the intersection of Pratt Ave/SR HWY 29 WB will operate unacceptably under Level of Service "F" during the AM and PM peak hours.

**Mitigation Measure (IS/MND Page 50 , Trip Capacity - Not formal Mitigation Measure)**

- The CIA is proposing to increase the capacity of its three shuttle buses that transport students from the Vineyard Lodge to Greystone.

**The Applicant has failed to adequately identify and mitigate the impacts for Transportation/Traffic for the following reasons:**

- The Traffic Impact Report ("TIR") only considers peak A.M. and P.M. shuttle bus trips from Vineyard Lodge to Greystone. The TIR fails to consider the full magnitude of personal trip usage of the 72 permitted cars located at Vineyard Lodge;
- The TIR incorporates a theoretical estimate of the traffic contribution from the Las Alcobas Hotel driveway, which is located at the intersection of Pratt Avenue/HWY 29. The TIR may prove to be inaccurate when the actual traffic impacts resulting from the Las Alcobas Hotel begins operating at full capacity (Sometime after its opening in 2017). Since the Las Alcobas Hotel is a large project (68 guest rooms plus a restaurant serving the general public), with potentially significant impacts in the same area as the proposed project and the proposed Beringer projects, it would be prudent to deny the proposed Vineyard Lodge expansion project until the actual full traffic impacts can be further determined.

## Public Comment 16

**Utilities/Public Services:****Potentially Significant Impacts (All categorized as Less than Significant, IS/MND Page 55)****Impact Analysis (IS/MND Page 56-57)**

- (Wastewater Treatment). At the Vineyard Lodge Housing Site, the sanitary sewer management system will accommodate a peak daily flow of approximately 9520 gpd which equates to a projected net increase of 1960 gpd over existing capacity (flow);
- (Sufficient Water Supplies). The total water allotment across the two sites amounts to an average of 20,650 gpd. The Applicant proposes to rescind the two separate agreements and adopt a new joint water agreement which would redistribute the gross water allotment across the two sites to accommodate the increase in housing at the Vineyard Lodge site.

**Mitigation Measure (None offered)**

- Utilities/Public Services was subjectively categorized as Less than Significant, therefore, no mitigation measures was offered.

**The Applicant has failed to adequately identify and mitigate the potential impacts for Utilities/Public Service for the following reasons:**

- The Wastewater Feasibility Analysis for the expanded Vineyard Lodge housing reports the anticipated peak daily flow of approximately 9520 gpd. The current average recorded flow is 6373 gpd. The actual increase in average daily flow from the expanded Vineyard Lodge will be a minimum of 3147 gpd (an increase of 49%, rather than the 1960 gpd cited above in the Impact Analysis);
- Additionally, the onsite equalization pump tank is sufficiently sized to allow for only off-peak discharge to the City sewer;
- Odor Control. The Wastewater Feasibility Study for the Vineyard Lodge references, "There should be no noxious odors from a properly designed and operated treatment system. See Alternative Courses of Action for operation alternatives." No odor control mitigation is listed under Alternative Courses of Action;
- The Water Availability Analysis - Greystone and Vineyard Lodge reports data records which reflect the Baseline Existing Demand of 23,478 gpd, which is well above the current allotment of 20,650 gpd;
- The Proposed Water Use Demand is expected to be 21,667 gpd (Annual use adjusted to 19,796 gpd.) These are theoretical calculations and actual water demand could continue to exceed water allotment volumes.

## Public Comment 16

**Mandatory Findings of Significance:**

(Degrade the Environment) Less than Significant (IS/MND Page 56)

(Cumulatively Affect the Environment) Less than Significant (IS/MND Page 56)

**The Applicant has failed to adequately identify the Mandatory Findings of Significance for the following reasons:**

As presented in this paper, the Applicant has failed to thoroughly analyze each of the environmental factors that are potentially affected. Many of the technical studies, which are the basis of the Applicant's subjective findings, are "nuanced" on a conditional set of variables, or factors, rather than evaluating the potential impact in its entirety. Contradictions in conclusions between the Applicant's technical reports have been brought forth to reflect the effect each has on the degree of significance of impact. As a result, the impact is either not mitigated or the mitigation measure offered is ineffective.

The Applicant's Initial Study/Mitigated Negative Declaration does not properly identify nor mitigate all of the Potentially Significant Impacts to the environment. Pursuant to CEQA Section 21082.2.d. "If there is substantial evidence, in light of the whole record before the lead agency, that a project may have a significant effect on the environment, an environmental impact report shall be prepared." In the event the Planning Commission and City Council find that the project does not fail on the criteria of Design Review or Use Permit findings, the Applicant should be required to perform an EIR to fully delineate the Potentially Significant Impacts to the environment.

## Public Comment 17

**From:** bertz345@aol.com  
**To:** [Lilly Bianco](#)  
**Subject:** PRATT AVENUE CIA DORMS  
**Date:** Wednesday, February 15, 2017 3:55:36 PM

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My name is Linda Bertoli I have lived on Pratt Avenue for forty years. I see the CIA plans to expand their facility on Pratt. I am not for this. For years the community has been asked to cut back on their water usage. We all try and do the best we can. We are a community and appreciate living here. We are friends and neighbors.

It is my understanding the CIA want to double the size of the existing dorms with 3 new multi-story buildings. With an increase of over 120 students, they will probably want sinks, toilets, showers and probably clean linens. I wonder if they would be sensitive to our constant water shortage. They would be strangers in our community. Pratt is a country lane with no side walks. There was an accident in front of our house killing 4.

Every day I drive to town I see worker's cars (probably 40 or more) working on the hotel at Main and Pratt. I am sure no one knows the impact of that hotel. (the corner of Pratt and Main) Then we will have several more years or worker's cars. I wonder how many of these workers are even from Napa County.

I wonder, also, who are these students? are they taking a year-long class or a couple from the east taking a 2-week class in egg whites and visiting the Napa Valley (staying in the dorms with no hotel tax)

Do we have to say "yes" to every one who shows up with a wad of cash? Is there room on our roads for a couple hundred more cars?

So if anyone wants to know ..... I am against this CIA dorm expansion... Linda Bertoli 345 Pratt Ave.  
 963-2293 2/15/2017

Public Comment 18

**From:** Lars Kronmark  
**To:** [Lilly Bianco](#)  
**Subject:** lars and a note about Pratt and CIA  
**Date:** Wednesday, February 15, 2017 5:18:46 PM

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Attn: Mayor Alan Galbraith, Grace Kistner, Chairperson, Bobbi Monnette, Commissioner, Sarah Parker, Commissioner, Tracy Sweeney, Commissioner; Noah Housh, Planning & Community Improvement Director, Lilly Bianco, Contract Planner

In 1995, I had the pleasure of being part of the Opening Team for the Culinary Institute's Greystone Campus. In 2000, I moved to St Helena with my family where we now have our roots and a son who just graduated from the High School. I am a Faculty Member at the C.I.A. and am involved in our town as much as my time allows. For example, I am a long serving Board Member of the St. Helena Farmers' Market.

I am writing this letter in support of the expansion and beautification of the C.I.A's Student Housing on Pratt Avenue that will be discussed at the Planning Commission's Meeting next Tuesday.

Our students are committed to being positive and well behaved residents of St. Helena. Wherever I go in St Helena, I see them walking, biking and shopping with lots of energy and acting in a professional manner. I think we are very fortunate to have this "younger age group" in the valley at a time when 1) many of our towns are inhabited with an aging population and 2) an increasing number of homes have become second homes owned by people who only only spend a few months of the year in the valley.

In addition, the students take great pride in responding to the many requests for assistance at fundraising events from local Non-Profit Organizations such as the Cameo Cinema, the Fire Department, the Farmers' Market and many many more.

I hope you will agree that we are very fortunate to have this energetic and professional support in our town..

I am asking for your kind assistance in approving the proposed plans for the expansion and beautification of the Student Housing at Pratt Avenue - for today's students and those in the future.

I thank you for your consideration.

Best regards

Lars Kronmark

Lars Kronmark

Professor CWP

Culinary Institute of America at Greystone

Public Comment 18

2555 Main Street

St Helena CA 94574

Home Address

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Lars Kronmark

Chef Instructor

Culinary Institute of America, Greystone

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Attachment 8

**City of St. Helena**



# **Culinary Institute of America Campus Master Plan**

Response to Comments  
on the  
Draft Initial Study/Mitigated Negative Declaration

February 21, 2017

## **RESPONSE TO COMMENTS ON THE DRAFT INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION**

### **CULINARY INSTITUTE OF AMERICA CAMPUS MASTER PLAN GREYSTONE CAMPUS AND VINEYARD LODGE HOUSING**

This document provides responses to comments received on the Public Draft Initial Study/Mitigated Negative Declaration (IS/MND) for the Culinary Institute of America Campus Master Plan (hereinafter referred to collectively as the “project”). These responses address issues raised by the comments and clarify and reiterate discussion provided in the IS/MND. This document also includes corrections and additions to the IS/MND in response to comments received. These corrections and additions clarify or correct text in the IS/MND, but do not change the findings or conclusions of the analysis. This response to comments document along with the Draft IS/MND constitutes the Final IS/MND.

In accordance with the California Environmental Quality Act (CEQA) of 1970 (as amended) (California Public Resources Code 21000 et. seq.), the IS/MND was circulated for a 20-day public review and comment period from December 9 to January 3 and extended for another 20 days, until January 23, 2017, for a total comment period of 40 days. Twelve (12) comment letters were received on the IS/MND. To the extent possible, comment letters received outside of the public comment period were also responded to. As explained herein, in light of the whole record, the City of St. Helena finds that all potentially significant impacts have been adequately addressed in the IS/MND and this Response to Comments.

### **CEQA REQUIREMENTS**

CEQA Guidelines Section 15074 identifies the responsibilities of the Lead Agency when considering the adoption of a Negative Declaration or Mitigated Negative Declaration:

- (a) Any advisory body of a public agency making a recommendation to the decision-making body shall consider the proposed negative declaration or mitigated negative declaration before making its recommendation.
- (b) Prior to approving a project, the decision-making body of the lead agency shall consider the proposed negative declaration or mitigated negative declaration together with any comments received during the public review process. The decision-making body shall adopt the proposed negative declaration or mitigated negative declaration only if it finds on the basis of the whole record before it (including the initial study and any comments received), that there is no substantial evidence<sup>1</sup> that the project will have a significant effect on the environment and that the negative declaration or mitigated negative declaration reflects the lead agency’s independent judgment and analysis.

Consistent with CEQA requirements, the City of St. Helena has reviewed and considered all comments received on the IS/MND. CEQA does not require the lead agency to prepare a response to public comments received on a Negative Declaration or Mitigated Negative Declaration. Nevertheless, the City of St. Helena has prepared this document to fully disclose all public and agency comments received and to provide responses to those comments.

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<sup>1</sup> “Substantial evidence” includes facts, fact-related reasonable assumptions, and expert opinions based on facts. It does not include arguments, speculation, unsubstantiated opinion or narrative, clearly inaccurate or erroneous evidence, or socioeconomic impacts not related to the physical environment. (Pub. Res. Code Secs. 21080(e), 21082.2(c); Guidelines § 15384).

## ORGANIZATION OF THIS DOCUMENT

Section 1 includes a “List of commenters on the Draft IS/MND.” The comments received on the Draft IS/MND and responses to those comments are included in Section 2, “Responses to Public Comments.” Section 3 provides, “Revisions to the IS/MND,” which includes corrections and additions to the IS/MND. Corrections and additions to the IS/MND are shown in underline for new text added and in ~~striketrough~~ for text that was deleted. Section 4, “Summary” contains a summary of this responses-to-comments process and subsequent action by the City of St. Helena regarding the project.

### 1. LIST OF COMMENTERS ON THE DRAFT IS/MND

The MND was circulated for a 40-day public review period that began December 9, 2016 and concluded on January 23, 2017. The City of St. Helena received a total of 12 comment letters on the IS/MND (see commenters 1-12 below). Written comments received during the public review of the IS/MND were from the individuals listed below:

1. Tom Thurmond, December 23, 2016
2. Tom Belt, December 23, 2016
3. Celia Lenson, December 26, 2016
4. George Caloyannidis, December 26, 2016
5. Donna Hinds, January 11, 2017
6. Tom Rinaldi, January 11, 2017
7. Dianna Varozza, January 17, 2017
8. D Packman, January 9, 2017
9. Carol Norfleet, January 18, 2017
10. Anthony Micheli, January 13, 2017.
11. Paul Bertoli, January 19, 2017
12. Priscilla Dell, January 24, 2017

Section 2, below, provides the City’s responses to comments received. A number of written comments received conflate points and opinions relevant to the project’s merits with points pertinent to the potentially significant environmental effects of the project. As required under CEQA, the Response to Comments focuses on points relevant to the environmental review and limits discussion of comments related to the project’s merits and which do not directly relate to the adequacy of the environmental document. Pursuant to CEQA Section 15073, a lead agency is not required to prepare formal written responses to comments on a mitigated negative declaration. Nonetheless, the City has prepared formal responses in an effort to provide a greater level of clarity and disclosure.

Comment letters received on the IS/MND involved variations of many of the same themes. To avoid redundancy and fully address all comments and concerns, the City has prepared “Master Responses,” which serve as topical responses to address those comments replicated across comment letters. The Master Responses are followed by responses to individual comments letters and which address points not covered under any Master Response. The City reviewed and

considered all comments received. In no instance did the comments result in the identification of a new or previously unidentified significant impact.

**Master Responses on the IS/MND centered on the following issues:**

1. Aesthetics
2. Public Utilities
3. Traffic
4. Safety
5. Project Alternatives
6. Preparation of an EIR

**2. RESPONSE TO COMMENTS RECEIVED**

**MASTER RESPONSE 1. AESTHETIC IMPACTS**

*The commenters assert that the building(s) proposed for 830 Pratt Avenue will adversely impact existing view sheds and that the scale and height are inconsistent with the rural character of the neighborhood and would cause an adverse impact to the visual environment.*

As described on page 13 of the IS/MND, the City of St. Helena has not identified any specific vistas or viewsheds subject to protection, but rather, states that the sense of a strong connection to the surrounding agricultural open space and hillsides should be preserved in the future and that views of Vineyards, hillsides, creeks and major landscape features should be maintained. Consistent with the requirements of CEQA Section 15125, projects are to be analyzed against baseline conditions, which is generally interpreted to mean the physical condition existing at the time the environmental document is prepared *and/or* in limited circumstances, the physical condition projected to exist when a project becomes operational. Accordingly, the baseline conditions against which the proposed project was analyzed include a previously developed site in an otherwise agricultural and residential area with two existing dormitories, one to two stories in height, and exhibiting a total of 27,662 square feet and a parking lot with 85 spaces. The subject site is directly proximate to a series of three water treatment ponds (northeast of the site), and the Beringer Winery production facility that includes warehouses, offices, and a tank farm. At present, the site provides for intermittent views of surrounding vineyards and hillsides located to the east and west.

Pursuant to CEQA, a project may cause a significant impact to the visual environment if it would, amongst other things, have a *substantial* adverse effect on a scenic vista or substantially degrade the existing visual character or quality of the site and its surroundings. To discern whether or not the project would cause a substantial adverse impact to a scenic vista or existing visual environment, the applicant prepared a Visual Impact Assessment based on the Bureau of Land Management methodology (**Appendix U of the IS/MND**). The Visual Impact Assessment evaluated modifications to the aesthetic environment for the foreground, mid-ground and background views from eight representative viewpoints and in relation to seven landscape components, namely, landform, vegetation, water, color, adjacent scenery, scarcity, and cultural modifications. It was determined that in most instances, the project would not measurably alter the viewers' perception of the visual environment, or degrade or obstruct existing scenic vistas i.e. the site would continue to read as multi-story dwelling units (dormitories) in an otherwise agricultural and residential area and continue to provide intermittent view of the surrounding agricultural areas and hillsides.

Certain viewpoints along Pratt Avenue, namely, VP1, VP4, and VP6 (as set forth in the Visual Impact Assessment, Appendix U of the IS/MND, would be subject to a greater level of change primarily due to the replacement of surface parking with buildings B and C. Nevertheless, it was concluded, based on the Visual Impact Assessment, that new construction would be of a scale and character consistent with the existing Vineyard Lodge II and that building design and colors will serve to limit changes to the visual environment. Last, mitigation measure AES-1 was introduced to ensure that the final landscape plan will exhibit a level of vegetative screening commensurate with that proposed, which will screen new buildings and therefore sufficiently limit visual changes to a less than significant level. Accordingly, the project is not expected to cause a *substantial* adverse effect on a scenic vista or *substantially* degrade the existing visual character or quality of the sites and its surroundings relative to the existing condition and impacts would be less than significant. No further analysis is therefore warranted.

#### MASTER RESPONSE 2. PUBLIC UTILITIES

*Commenters assert that the Crinella pump station and wastewater Treatment Plant are inadequate to serve the project. In addition, commenters have indicated a concern related to adequacy of potable water supplies and presumed use of groundwater.*

Under CEQA, a project may cause a significant impact if it would, "require or result in the construction of new water or wastewater facilities, the construction of which could cause significant environmental effects." As described on page 56 of the IS/MND under impact 16(B), the Vineyard Lodge project would result in a net increase of wastewater relative to existing conditions. However, the applicant is proposing on-site retention and treatment such that there would be no increase in instantaneous peak flows and therefore the loads placed on the sewer system would be largely consistent with those existing. This theoretical assumption will be confirmed pursuant to condition of approval No.45, which requires the applicant perform a sewer capacity study.

In addition, the applicant is subject to a sewer impact fee assessed with the purpose of funding future upgrades and expansions of the wastewater collection system, treatment plant and/or associated pump stations. The assessment of development impact fees constitutes a uniformly applied development standard which is reflected as a condition of approval. It is presumed that impact fees will be imposed on the project and because the assessment of mandatory impact fees would cover the project's fair share contribution, any impacts subject to said fees would be less than significant and therefore no mitigation is required.

It should be further noted that, under state law, impact fees may only be collected to cover the impact of new development on existing infrastructure. Impact fees cannot be used to correct "existing deficiencies". Funding for maintenance and improvements to the City's wastewater infrastructure to correct existing deficiencies is from Wastewater utility rates (paid by consumers).

#### **Crinella Pump Station**

The Crinella Pump station serves properties located in northeast St. Helena. According to available records, the Crinella Pump station has undergone recent upgrades pursuant to mitigation imposed on the Los Alcobas Hotel project, which included the installation of a new 6" force main (to replace the existing 4" main) and 10" containment pipe that extends a distance of 1,210 linear feet from the Crinella pump station to the existing sewer system at the intersection of Railroad and Fulton Avenues.

To address the net increase in effluent, the CIA project applicant proposes upgrades to the SS primary treatment system which will include new septic and pump tanks. In addition, a new equalization pump tank will be used to collect and store effluent. The equalization pump will utilize onsite storage capacity and equivalent pumps to maintain the same instantaneous peak flow of the existing facility. As a result, there will be *no* increase to the instantaneous peak flow rate to the Crinella Pump Station relative to that which currently exists. No increases in peak flows will occur from implementation of the proposed expansion of the dormitories. Similarly, timed dosing (conveyance) of primary treated effluent during off-peak hours would further reduce loads placed on the pump station and Wastewater Treatment Plant. The retention of the same instantaneous peak flow and timed dosing during off-peak hours will prevent any adverse impacts to the Crinella pump station. When considered individually *and* in conjunction with other approved/ reasonably foreseeable projects, the expansion of the Vineyard Lodge Housing is not expected to place a demand on the Crinella pump station that could not be accommodated by the current system.

#### **Wastewater Treatment Plant**

From the Crinella Pump stations, flows are conveyed to the St. Helena Wastewater Treatment Plant. The Treatment Plant exhibits a dry weather treatment capacity of .5 million gallons per day (MGD) and a wet weather capacity of upwards of 2.8 mgd. On average, the WW Treatment plant treats approximately 400,000 gallons per day. Accordingly, the expected increase in flows generated by the subject project, which equate to 3,232 gpd, would be considered minimal. Further, because the project will provide on-site treatment, the effluent conveyed to the WW Treatment plant is expected to have 45 percent less Biological Oxygen Demand (BOD) relative to typical domestic water. Likewise, on-site treatment will also reduce Total Suspended Solids (TSS) by 80 percent relative to typical domestic water. Given that the net increase in effluent constitutes a relatively negligible amount and that the project applicant proposes primary on-site treatment, the loads placed on the wastewater treatment plant are minimal and not expected to generate an adverse impact.

Commenters allude to the fact that the California Regional Water Quality Control Board has ordered that upgrades be made to the City's Wastewater and Treatment Plant as a basis for the asserting that the sewer systems is inadequate to accommodate the proposed project. As a condition of 2016 NPDES permit reissuance, the City must come into compliance with current effluent limits for BOD and TSS by the year 2021. The NPDES permit authorizes discharge into the Napa River (a non-tidal waterway) given the absence of other feasible alternatives, *with* the stipulation that the City meet more stringent standards for BOD and TSS which are attainable by implementing more advanced secondary treatment. The city has until 2021 to come into compliance with the effluent limits and in the meantime is required to meet "interim" effluent limits.

Given that the amount of effluent generated by the subject project is, in relative terms, a minimal amount and that the project would perform primary on-site treatment to significantly reduce the level of BOD and TSS, the loading capacity placed on the Wastewater Treatment plant can be accommodated and the project would not cause the Wastewater Treatment Plant to exceed any of the effluent limits imposed on the facility now or in the current permit term. Further, the applicant will be assessed a sewer impact fee between 71 cents/ sq.ft. (Multi-Family Residential) to 94 cents/Square foot (lodging), equating to a total assessment value between \$18,172.45 and 24,059.30. The sewer (wastewater) impact fee accounts for the costs associated with maintenance and improvement to the Wastewater Treatment Plant and Sewer Collection System in order to support new development. With sewer system upgrades proposed

by the project and the assessment of impact fees, the project is not expected to exceed or otherwise negatively impact the existing sewer system and infrastructure.

To conclude, given that the project would not increase the instantaneous wastewater peak flows of the site nor exceed the available capacity or effluent limits of the St. Helena Wastewater Treatment Plant and that the applicant would also pay the sewer impact fee which is commensurate with their fair share contribution, impacts related to wastewater would be less than significant. While no further analysis is warranted, the IS/MND will be updated to clarify and expand on the analysis to more accurately represent the project's relationship with the Wastewater Treatment system. In addition, an incorrect reference to the peak daily wastewater flows and anticipated increase will be corrected. The following changes to the language included on page 57 of the IS/MND, 16(a) will be made, as shown below:

**A. (Exceed Wastewater Treatment Requirements) Less Than Significant Impact:** The project is not expected to exceed wastewater treatment requirements set forth by the Regional Water Quality Control Board. To accommodate wastewater flows generated at the Greystone Campus, the existing onsite primary treatment would be used, including one 3,000 gallon grease interceptor, two 7,500 gallon settling tanks and one 6,000 gallon settling tank, and a pump sump and pump to convey the SS flows to the Markham Combined Wastewater System (MCWS) located at Markham Winery on SR 29, north of St. Helena. Improvements to the existing dishwashing and other kitchen facilities, including replacement with more water and energy efficient equipment, in addition to the closure of the WSGR would reduce the overall water and wastewater demand for the site. Taken together, the proposed improvements will lead to a net decrease in flows conveyed and treated at the MCWS and will be within the authorized discharge amount of 14,850 gpd.

At the Vineyard Lodge Housing site, wastewater will be generated by dormitory restrooms, showers, and common areas. The project will utilize the existing sanitary sewer (SS). Effluent would undergo primary treatment in septic tanks and then be conveyed to the municipal sewer system through the existing 3" SS. The SS management system will be resized to accommodate a peak daily wastewater flow of approximately ~~9,520~~ 9,605 gallons per day (gpd) which equates to a projected net increase of ~~1,960~~ 3,232 gpd over the existing ~~capacity~~ average recorded flow of 6,373. Effluent will undergo primary treatment in septic tanks, which will produce effluent that is of higher quality than residential wastewater. A new equalization pump tank will be used to collect and store effluent. The equalization tank will provide approximately 12.5 hours of retention time at the anticipated peak daily flowrate of 9,520 gpd, and is sufficiently sized to allow for only off-peak discharge to the City's sewer system. The equalization pump will utilize on site storage capacity and equivalent pumps to maintain the same instantaneous peak flow discharge as the existing facility. As a result, there will be no increase to the instantaneous flow rate to the City sewer system and therefore no adverse effect on the sewer system capacity. No increases in peak flows are proposed to the City sewer system, and the timed dosing of primary treated effluent during off-peak hours would prevent any adverse impacts to the City sewers.

The wastewater flows will be conveyed to the City of St. Helena Wastewater Treatment Plant, which has sufficient operating capacity to handle the additional flows generated at the Vineyard Lodge Housing site. Further, the project will be assessed the sewer impact fee which will help to maintain the existing system and contribute to the additional costs that will be incurred with the future expansion and upgrade of the wastewater treatment plant. Therefore, the project would not exceed wastewater treatment requirements and impacts would be less than significant.

**b.(New Wastewater treatment Facilities)** Less Than Significant Impact: There would be no new construction or expansion of domestic water or wastewater facilities as part of the proposed project. For the Greystone Campus, as stated above, wastewater flows are expected to decrease following project implementation. For the Vineyard Lodge Housing site, as stated above, the project would result in a net increase of ~~1,960~~ 3,232 gpd of wastewater over existing flows. However, the City of St. Helena Wastewater Treatment Plant has sufficient operating capacity to handle the additional flows generated at the Vineyard Lodge Housing site. Further, a sewer impact mitigation fee will be assessed with the purpose of ~~maintaining~~ improving the existing system and to contribute to offset costs of future expansion and upgrade of the wastewater treatment plant. The sewer impact fee will be assessed against the dormitory project at the time of issuance of building permits, therefore, impacts would be less than significant

#### Ground Water

*As stated above, several commenters purport that the proposed project will use groundwater and express concerns that there is not a sufficient level of groundwater in the aquifer to serve the subject project.*

As detailed on page 65 of the IS/MND, the CIA maintains two separate water agreements applicable to the Greystone Campus and Vineyard Lodge Housing Site. The current water allotments authorized by the Agreements allocate an average of 15,900 gpd to Greystone and 4,750 gpd to the Vineyard Lodge Site. The total allotment across the two sites amounts to an average of 20,650 gpd or 23.1 acre feet (AF) per year. As part of the CIA Master Plan project, the applicant is requesting to rescind the two separate agreements and adopt a new joint water agreement which would redistribute the gross water allotment across the two sites while maintaining the current total allotment of 23.1 AF per year.

The Greystone site has one existing well which may be used for landscape irrigation or domestic water use and will continue to be used as such under a new joint water use agreement. There is no new landscaping proposed for the Greystone site and no expectation that the project would result in a substantial increase to the amount of groundwater extracted from the onsite well. There are no groundwater wells at the Vineyard Lodge Housing Site and none are proposed. Rather, water supplies at the Vineyard Lodge Housing Site are provided by the City's municipal water supply, of which approximately 49% percent is sourced from Bell Canyon reservoir, 31% is provided by the City of Napa and approximately 20 % from Stonebridge Wells.

As specified in the IS/MND, the project will not result in a net increase to water use and will, like all water customers, be subject to water use restrictions imposed during dry years. Additionally, under the Water Agreements, the applicant will continue to be required to monitor and report City water use on a regular basis and be subject to penalties in the event that authorized water amounts are exceeded. Given the above, there is no expectation that the proposed project would exceed available water supplies or necessitate new or expanded water entitlements. Accordingly, no further analysis is warranted.

#### MASTER RESPONSE 3. TRAFFIC

*Commenters assert that the project would cause traffic impacts which may be cumulatively significant and that sufficiency of parking on the Vineyard Lodge Housing Site at 830 Pratt Avenue is inadequate.*



*Traffic impacts/ LOS delays*

The traffic analysis prepared by traffic consultant, Crane Transportation, was conducted in accordance with CEQA and appropriately determined that the project would not generate significant traffic impacts, cumulative or otherwise, and as detailed below.

The project's traffic impacts were evaluated consistent with the requirements of CEQA in Section 15, 'Transportation/Traffic,' of the IS/MND. The Traffic consultant, Crane Transportation, performed traffic counts on Thursday, May 12, 2016 for the period from 6:00 AM to 6:00 PM to establish the existing condition exhibited by the study intersections. Volumes were then seasonally adjusted consistent with Caltrans' PeMS (Performance Measurement System) peak season data for S.R. 29-128 to represent peak season conditions.

Traffic and intersection operations were evaluated using level of service calculations. Level of Service (LOS) provides for a qualitative description of operations that range from "LOS A," whereby the roadway exhibits excess capacity and little or no delay is present, to "LOS F," whereby the volume of traffic exceeds the capacity and generates long queues and excessive delays. Typically, "LOS E" represents "at capacity" conditions and "LOS F" represents "over capacity" conditions.

For side street stop-controlled intersections, such as that exhibited by the Pratt Avenue/ SR 29 intersection, operations are defined by the level of service and average control delay per vehicle (measured in seconds), with delay reported for the stop sign controlled approaches or turn movements. In an effort to evaluate the project's reasonably foreseeable impacts, traffic impacts were evaluated under existing, baseline (2018), and future (2035) scenarios.

As detailed in the Traffic Analysis, the significance criterion established by the 1993 St. Helena General Plan and applicable to the subject project reads, *"All unsignalized intersections must maintain LOS C. If the LOS degrades below LOS C, an evaluation of the need for traffic signalization shall be undertaken according to standard Caltrans signal warrants as described below. If signals are not initially warranted, the location shall continue to be monitored for signal warrants on a regular basis."*

Under existing conditions without the project, the Pratt Ave/ SR HWY 29 WB intersection exhibits an LOS "D" under the AM Peak hour and LOS "E" under the PM Peak Hour and therefore the level of service is *already* below that considered acceptable by the General Plan, which is LOS C. Under baseline and future scenarios, the intersection further degrades to LOS "F" under conditions *without* the project.

In accordance with the significance criteria applicable to the project, a warrant threshold analysis was undertaken to determine the need for signalization. There are 9 possible tests for determining whether a traffic signal should be considered for installation. As detailed on page 9 of the traffic Study (**Appendix Q**) These tests, called "warrants", consider criteria such as actual traffic volume, pedestrian volume, presence of school children, and accident history. The intersection volume data together with the available collision histories were compared to warrants contained in the Manual on Uniform Traffic Control Devices (MUTCD), Federal Highway Administration, 2014, California Supplement.

As stated in the Traffic Impact Report and on page 52 of the IS/MND, signal warrant thresholds were *not* met and therefore signalization is not needed and the project is not required to install signalization or otherwise mitigate for an impact. Accordingly, the Vineyard Lodge's contribution to traffic delay is determined not to be so substantial as to conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system and does not constitute a potentially significant impact necessitating mitigation.

The commenters' concerns related to the delay on Pratt Ave/SR Hwy 29 WB Intersection. While the traffic study does confirm the assertion that the Pratt Avenue/ SR Hwy 29 intersection exhibits a deteriorated LOS under all scenarios (existing, baseline, and future), the substantial delay is an existing condition and continues to occur under future scenarios both with *and without* the project. The project's contribution to the existing delay is not great enough to trigger the need for signalization. The need for signalization at the Pratt Avenue/SR 29 intersection will continue to be monitored as subsequent project's trigger the need for a traffic study/warrant analysis and as needed to inform the Napa Valley Transportation Authority (NVTA) circulation plan updates and Caltrans studies. Further, the project will be assessed a traffic impact fee which will help pay for circulation improvements to reduce the impacts of traffic generated by new development within the City. Finally, all subsequent projects subject to CEQA will be required to evaluate their respective traffic impacts and contributions to roadway delays and mitigate accordingly. Given the above, the IS/MND's conclusion that the project will have a less than significant impact and the determination that the project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system remain valid.

#### *Cumulative Traffic Impacts.*

To determine whether impacts may be "cumulatively considerable" the City directed the traffic consultant to evaluate traffic under the existing, baseline, and future year scenarios. The baseline scenario accounts for traffic generated by "pipeline projects" or those which are approved and/or reasonably expected to be constructed in the next 2-3 years; the traffic study accounted for traffic generated by the Los Alcobas project; however, no other approved major projects were anticipated at the time the traffic study was prepared in November 2016. For the future year scenario, the traffic impacts included pipeline projects (Los Alcobas) *and* applied a 2.25 percent growth rate to reflect buildout of the General Plan in 2035.

Under CEQA, a traffic impact could occur if the project would (amongst other things) "Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system..." As stated above, the City's significance criterion applicable to the project is outlined in the General Plan, and reads: "*All unsignalized intersections must maintain LOS C. If the LOS degrades below LOS C, an evaluation of the need for traffic signalization shall be undertaken according to standard Caltrans signal warrants as described below. If signals are not initially warranted, the location shall continue to be monitored for signal warrants on a regular basis.*"

As detailed in the traffic study and MND, when the project's traffic impacts are combined with the anticipated traffic impacts of other past, present, and probable future projects in the area, they do not cumulatively increase traffic levels above the City's significance threshold ( i.e. warrant thresholds were not met under any of the scenarios). If this potential were to exist, the environmental document would be required to mitigate cumulative impacts. However, because, taken together, the existing, baseline, and future scenarios do not cumulatively exceed the significance thresholds, the projects traffic contributions are not "cumulatively considerable" meaning that the project does not have a potential to result in cumulative impacts and no further consideration of cumulative impacts is warranted.

#### Parking

*Commenters assert that the level of parking proposed for the Vineyard Lodge Housing expansion is not sufficient and that residents of the Vineyard Lodge will park along Pratt Avenue.*

A deficiency in parking does not in and of itself trigger a mandatory finding of significance nor is it necessarily considered a potential significant environmental impact; if however, the parking deficiency would contribute to or otherwise generate traffic congestion, safety hazards, etc., it may be a significant environmental impact. Because the Project and the proposed Vineyard Lodge Housing site has been planned and proposed to accommodate the transportation needs of its students through the provision of designated spaces and in conjunction with other means enumerated below, there will be no direct or indirect parking related impacts that would cause a potentially significant impact on the physical environment and no further analysis is warranted.

As stated on page 17 of the Traffic Impact Report (**Appendix Q**), the Traffic Consultant, Crane Transportation, performed hourly on-site parking surveys on Thursday May 12, 2016, which was considered to be a “typical day” at the CIA Greystone campus and Vineyard Lodge Housing Site. As detailed in the Traffic Impact Report (TIR) (which is incorporated into the IS/MND), at maximum, 42 vehicles were parked in the 85 space parking lot at the Vineyard Lodge Housing site. East of the main building, in the service parking area, there was one to three service vehicles parked throughout the day. At all times there were 43 or more available parking spaces in the parking lot. It was noted that permits were not readily displayed and therefore, the site did not appear to be monitored for permit holders versus visitors. Based on information obtained from the applicant, it is understood that 31 parking permits have been issued to students and therefore, it is assumed that vehicles in excess of that belong to visitors. The purpose of the parking analysis was to determine the appropriate number of parking spaces to provide a sufficient level of off-street parking for residents; as such, the TIR did not account for vehicles parked off-site and/or along Pratt Avenue.

As stated above, for the existing 101 rooms at the Vineyard Lodge Housing Site, only 31 parking permits have been issued. As such, it is reasonably concluded that the parking counts from May 2016 reflect the 31 permitted vehicles and approximately 10 visitor vehicles. With both resident and visitor vehicles, there remained an excess capacity of 43 parking spaces.

There is no reason to believe that the student to vehicle ratio would substantially change under the proposed project, namely because (1) the CIA retains authority to issue or not issue parking permits, (2) the project will be subject to a condition of approval stipulating that it may not issue more than 69 parking permits, and (3) the site is uniquely operated in that it provides frequent reliable transportation to and from the Greystone Campus and to other locations, as needed, will provide three on-demand rental cars, and per mitigation measure LU-1, will be required to introduce a scalable bike share program that may be expanded as demand necessitates. Mitigation Measure LU-1 specifies:

*“ To minimize reliance on vehicles, the applicant shall provide a minimum of five (5) on-demand bicycles to be available to residents on an as-needed basis. If there is an increase in student demand for bicycles beyond the number provided, the applicant is required to increase the number of bicycles available for dormitory residents to meet the demand. Bikes shall be maintained in good functioning condition and be readily accessible to residents. The applicant shall provide a written statement detailing how the on-demand bike service will function for review and approval by the Planning and Community Improvement Director prior to building permit issuance. The bikes shall be made available for use upon certificate of occupancy for whichever building is constructed first.”*

By providing parking permits and spaces at a level consistent with the “typical” demand and complying with Mitigation Measures LU-1 which requires an on-demand bike program, the demand for parking is not expected to exceed that provided by the project. As such, the provision of 69 designated parking spaces consistent with the ratio currently exhibited by the

subject site, is reasonable and is not expected to cause an adverse physical impact on the environment.

Finally, in regards to on-street parking — parking is allowed along Pratt Avenue insofar as there is adequate shoulder widths (8 feet) and where adequate shoulder widths do not exist, parking is prohibited and denoted by red striping. Vehicles parked in appropriate locations along Pratt Avenue do not pose a safety hazard or otherwise generate a significant impact on the environment and therefore, no further consideration of this matter is warranted.

#### MASTER RESPONSE 4. SAFETY

*Commenters note the poor condition of the Pratt Avenue Roadway and indicate that its current condition is not sufficient to maintain safety and that the CIA should do more to remediate the unsafe road conditions.*

As stated on page 49 of the IS/MND, Pratt Avenue serves as a two-lane collector that connects Main Street to Silverado Trail on the north side of the City and provides access to both residential and winery uses. The condition of the Pratt Avenue roadway is an existing condition and would continue to deteriorate with *or without* the project. The project's contribution to roadway deterioration of Pratt Avenue is expected to be average and not exceptional relative to the contributions of other users.

The proposed project would result in an increase in the number of students residing at the Vineyard Lodge housing site and attending weekday classes at the Greystone facility. Regular shuttle service would continue to provide transportation between the Vineyard Lodge Housing site and the Greystone campus on weekdays, as students would not be allowed to use a personal vehicle to attend classes at Greystone as stated by the applicant and consistent with the current practice of students enrolled at the CIA. This prohibition will be detailed in the Transportation Management Plan required pursuant to Condition of Approval No. \_\_\_. Alternatively, some students may choose to walk or bike to classes. However, shuttle buses would continue to be provided from 5:30 am to 9:00 pm with no change in frequency of shuttle trips given the proposed increase in shuttle size. Three on-demand rental cars will be provided for non-school related trips. It is recognized that the increase in traffic trips generated by the project would contribute towards typical wear and tear of the roadway.

The CEQA Guidelines and recent case law, namely, *Dolan v. City of Tigard*, 512 U.S. 374 (1994), acknowledge that mitigation measures imposed on a project must have an "essential nexus" to a legitimate government interest and must bear a "rough proportionality" to a project's impacts; in other words, the mitigation must be related both in nature and extent to the impact of the proposed project.

The portion of Pratt Avenue that extends from the dormitories to the intersection with Main Street includes the section of roadway which would be most frequently used by the residents of the Vineyard Lodge Dormitory. To ensure that the applicant contribute their fair share towards the maintenance of the most readily affected portion of Pratt Avenue, mitigation measure Trans-2 would be imposed on the project and stipulates that, *"The applicant shall either (1) micro surface the full width of Pratt Avenue along the Project frontage extending to the intersection of SR29 (Main Street), introduce by thermoplastic a Class II bike lane along westbound Pratt Avenue (northern side) extending from the project site to the intersection of SR 29 (Main Street) and Pratt Avenue and restripe for a fog line along eastbound Pratt (southern side) extending from the project site to the intersection of SR 29 (Main Street) and Pratt Avenue in accordance with St. Helena Bicycle Plan, 2012, Appendix B – Design Standards for Class I, II, and III Bikeways OR*

*(2) pay an in lieu fee of \$130,000 to provide funding for the City of St. Helena to perform the requisite improvements.”*

There is no nexus to require the applicant to contribute towards repaving *all* of Pratt Avenue because the Project, as proposed, will not generate a substantial increase in trips along the entirety of Pratt Avenue and given that the deteriorated condition of Pratt is an existing condition. As such, repaving all of Pratt Avenue would be disproportionate to the impacts of the project. By Law impact fees can only be collected to cover the impact of new development on existing infrastructure. In other words, Impact fees cannot be used to correct “existing deficiencies”. Accordingly, the mitigation measure Trans-2, set forth in the MND is sufficient to offset project specific impacts and no changes are warranted.

To further clarify, normal street maintenance is performed by the City of St. Helena and may include upgrades to maintain pavement, striping, curb and gutter, street lighting, access ramps, sidewalks and storm drain infrastructure, etc. The City utilizes a computer-based program that helps prioritize roadway maintenance and construction projects based on current Pavement Condition Index and available funding. The program prioritizes roadway maintenance based on level of deterioration and public use. The list of projects are then vetted by City staff and presented to City Council for approval each year. Funding to undertake street maintenance is comprised of General Fund, gas tax, grants, sales tax, and Measure T funding (available 2018). Street maintenance projects programmed in the pavement management plan for Fiscal Year 2016/2017 and 2017/2018 do not currently include Pratt Avenue. However, Staff will develop a new two year pavement management plan in conjunction with the Fiscal Year 2017/2018 budget. This pavement management plan will include more funding than the recent past due to new funding anticipated from Measure T in 2019. Measure T is expected to provide over \$600,000 per year to the City of St Helena to be used towards maintenance of streets and sidewalks.

#### MASTER RESPONSE 5. PROJECT ALTERNATIVES

*Commenters ask that alternative sites, including the Greystone Campus, be considered to accommodate housing.*

Mitigated Negative Declarations do not require the consideration of alternatives and as such, the scope of the CEQA review was limited to the proposed project. Where an Initial Study establishes that a project will not create substantial or potentially substantial adverse changes to the physical conditions within the area of the project, a negative declaration or mitigated negative declaration is appropriate. Here, the required mitigation measures ensure that the Project will not create significant environmental impacts and as such, the environmental document includes those elements required of an MND: A brief description of the project, location, and proponent's name (CCR §15071[a,b]), proposed finding that the project will have no significant effect (CCR §15071[c]), initial study documenting reasons supporting the finding (CCR §15071[d]), and mitigation measures to avoid potentially significant effects (CCR §15071[e]). Negative declarations and mitigated negative declarations do not require analysis of project alternatives because the project as proposed will not have a significant environmental impact. Thus, no alternative sites were required to be analyzed as a part of the Project's environmental review.

#### MASTER RESPONSE 6. PREPARATION OF AN EIR

*Commenters assert that that the project may result in potentially significant impacts, requiring the City of St. Helena to prepare an EIR to comply with CEQA.*

Based on the whole record before the City of St. Helena including the Initial Study, all potentially significant impacts can be mitigated to less than significant levels. Therefore, an MND is the appropriate level of environmental review.

The commenters do not detail *how* the project will result in significant impacts nor detail how or why mitigation measures are insufficient. Likewise, there is no specificity as to what significant impacts the project would generate. None of the comment letters received and included herein present a fair argument based on substantial evidence that the Project may have a significant impact on the environment.

“Substantial evidence” includes facts, fact-related reasonable assumptions, and expert opinions based on facts. It does not include arguments, speculation, unsubstantiated opinion or narrative, clearly inaccurate or erroneous evidence, or socioeconomic impacts not related to the physical environment. (Pub. Res. Code §§21080(e), 21082.2(c); Guidelines § 15384). CEQA § 15204(c) advises reviewers that comments should be accompanied by factual support: Reviewers should explain the basis for their comments, and should submit data or references offering facts, reasonable assumptions based on facts, or expert opinion supported by facts in support of the comments. Pursuant to § 15064, an effect shall not be considered significant in the absence of substantial evidence. At the drafting of this Response to Comments no such factual support has been provided that raises a fair argument that the Project, as proposed, may have a significant impact on the environment.

The City of St. Helena as the Lead Agency, has duly considered all comments received in response to the Initial Study and Mitigated Negative Declaration (IS/MND). The City of St. Helena finds that the IS/MND document itself, and the Lead Agency’s responses to comments, are adequate in evaluating potential impacts of the subject project. The City of St. Helena finds that none of the comments on the IS/MND are supported by “substantial evidence” in light of the whole record to create a fair argument as to the significance of any particular impact, either individually or cumulatively, as all significant impacts are either avoided or reduced to less-than-significant levels.

Impacts will be reduced to less-than-significant levels through the following: implementation of the mitigation measures described in the IS/MND and this Response to Comments document; Conditions of Approval, which will be required by the City of St. Helena during the permit process; and compliance with City of St. Helena Ordinances and uniformly applied development standards.

The City of St. Helena has determined that the project does not meet any of the conditions under CEQA Section 15073.5, as described in Section 4.0 Summary below. Therefore, recirculation of a revised IS/MND or the preparation of an EIR is not required. Consistent with the CEQA Guidelines, this response to comments document clarifies the information and analyses in the IS/MND. As such, the IS/MND along with the response to comments achieves the intent of CEQA by disclosing all potential impacts of the project and identifying feasible mitigation measures that reduce impacts to levels below significant..

## INDIVIDUAL COMMENT LETTERS 1-12

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Commenter: Tom Thurmond  
 Status: Individual  
 Date Received: December 23, 2016

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### **Comment 1-1**

*“Pratt Avenue already has become very dangerous to drivers, bicyclists, and pedestrians. The road surface is in poor condition, which increases the likelihood of accidents leading to death or injury. Resurfacing the small portion from the CIA dorms to Main St. will not resolve that problem. The City needs to require a larger contribution from the CIA toward repaving ALL of Pratt Avenue...”*

**Response 1-1**

See Master Response 4.

**Comment 1-2**

*“There is a major problem with speeding along Pratt. Cars and trucks hurtle along day and night at speeds well over the limit, endangering other drivers, walkers, and bikers. The CIA expansion is bound to exacerbate this problem...”*

**Response 1-2**

The speeds on City arterials are regulated by state and local law which is enforced by the St. Helena Police Department. As detailed on page 46 of the IS/MND, The Vineyard Lodge Housing Site is located near the urban limit line and proximate to the police and fire stations and is well served by public services. Pratt Avenue is patrolled at a level consistent with any other secondary artery (St. Helena Police Department, 2016).. Speed limits are enforced on Pratt Avenue on a random basis (like the rest of the City) to prevent frequent drivers from establishing time periods considered “safe to speed”. The Police Department has further indicated that they increase patrols at the request of residents, which typically equates to a few times per year.

The St. Helena Police Department did not issue any speeding citations in 2015 and 7 citations were issued in 2016 — it is unknown whether these citations were issued to residents of Vineyard Lodge. The number of citations issued is not exceptional relative to other areas of the City. For example, in 2016, 10 citations were issued on Pope Street and 6 on Sulphur Springs. As detailed on page 11 of the Vineyard Lodge Traffic Impact Report (**IS/MND Appendix Q**), Accident data provided by the City of St. Helena from SWITRS (Statewide Integrated Traffic Reporting System) for the Pratt Avenue/Main Street intersection revealed that over the past five years, there have not been five or more reported crashes at this intersection within any 12-month period. At most, there were 4 crashes between 10/21/11 and 10/24/12. There were three reported crashes in 2011, one in 2012, two in 2013 and 2014, and one in 2015.

Residents of the Vineyard Lodge Housing site would continue to be subject to state and local laws regulating speeds along Pratt Avenue and elsewhere in the City. Further, that street will continue to be monitored by the St. Helena Police Department and all local and state laws will be enforced. There is no evidence indicating that the proposed project would cause unsafe driving conditions or exacerbate the problem of speeding along Pratt Avenue and no further analysis is warranted.

If speeding on Pratt is of particular concern to the neighbors it may benefit from further consideration. However, this is not a project specific impact and therefore will not be addressed further here.

**Comment 1-3**

*“It is now often nearly impossible to make a left turn from Pratt onto Main due to the heavy traffic on Main. The CIA expansion will further add to this problem. When you include the new Las Alcobas*

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*hotel on the west side of the intersection and the potential increase in traffic associated with Beringer's planned changes at their Pratt Avenue winery, it makes the situation even more dire. I realize that the Pratt/Main intersection is under State control. Nevertheless, the City should proactively be taking measures to mitigate the problem. With the current fiscal problems facing the City, it is incumbent on staff to require the maximum contribution from the CIA to help alleviate the problems they are making worse."*

**Response 1-3**

Please refer to Master Response 3 for a discussion of traffic impacts and discussion of cumulative traffic impacts. Traffic impacts are discussed in the IS/MND on pages 48 to 55.

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Commenter: Tom Belt

Status: Individual

Date Received: Dec 23, 2016

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**Comment 2-1**

*"The big bucks behind the CIA needs to pay for the increase in size of the waste water line that will be needed to handle the CIA's new dormitories and increased burden of affluent. The current waste water line is already at capacity that services the Crinella housing tract. Adding another 9,520 gallons a day will over burden the line. It's about time our city management makes these big developers pay for the costs of necessary up grades to our utility infrastructures rather than keep passing them on to the current water and waste water customers. All we hear about lately is how inadequate our waste water facility is and how poorly our city's reputation is with the State Water Board. And now the CIA wants to add to this problem. They need to pay!"*

**Response 2-1**

Please refer to Master Response 2.

**Comment 2-2**

*"Also, the article in the Star leads the reader to believe the CIA wants to reallocate its current water use by changing its agreements with the city. If I read the article correctly, it looks like the CIA wants to use more ground water to make up for the demand at the dormitories. Does anyone meter the ground water currently being taken by the CIA? St. Helena has a moratorium on drilling new wells in the residential area of St. Helena, yet the city is okay with allowing the CIA to pump even more water from the ground. Come on St. Helena City Management, get your act together and make these businesses pay for the adverse impacts these developers and developments place on the residents who live here!"*

**Response 2-2**

Please refer to Master Response 2.

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Commenter: Celia Lenson

Status: Individual, property owner at 925 Pratt Ave

Date Received: December 26, 2016

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**Comment 3-1**

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City of St. Helena

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*“ CIA Landscaping: Since the structure will double in size, I hope the City will consider that the dorms have beautiful landscaping to mitigate the size of the building. Such as Trees and California Native plants”*

**Response 3-1**

The applicant is proposing a generous amount of landscaping as detailed on project plans, (IS/MND **Appendix K**). As evidenced by the Visual Impact Assessment (**Appendix U**) retention of the existing camphor trees located along the property frontage and the introduction of the landscaping depicted in the landscape plan, will provide a level of screening so as to reduce and soften the visual impact of the proposed buildings. To ensure that the landscape plan is properly implemented and that the type and amount of vegetation is commensurate with that approved, the project is subject to mitigation measure AES-1, which states that, “The final Landscape Plan and proposed vegetative screening shall be subject to review and approval by the Planning and Community Improvement Director prior to issuance of building permit so as to confirm consistency with approved plans.”. Accordingly, the analysis and associated mitigation adequately address the aesthetic concerns of the project.

**Comment 3-2**

*“2. CIA Parking: The City has not enforced parking restrictions on CIA. Sometimes, all of Pratt Street looks like a sea of cars. This is a displeased to the Community. No one likes looking at a parking lot considering the cost of the homes on Pratt Street.”*

**Response 3-2**

See Master Response 3.

**Comment 3-3**

*“3. Bike Lanes: The bikes lanes are a great idea. I hope the City restricts Pratt parking to the residents on Pratt Street because CIA abuses the parking on Pratt. Many residents have complained... If all the issues are addressed, I welcome the dorms.”*

**Response 3-3**

Please see Master Response 3.

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Commenter: George Caloyannidis-

Status: Individual

Date Received: Dec 27, 2016

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**Comment 4-1**

*“ Is there a definition to the application as to who qualifies as a student. I have to assume that whatever that definition is, any other tenants such as staff, instructors etc would be excluded and that there is associated language to that effect.”*

**Response 4-1**

The project will be conditioned such that only students, meaning those who are actively enrolled in either the certificate or associate degree programs (1 and 2 years, respectively) may reside on the Greystone Campus or at the Vineyard Lodge Housing Site. This would preclude other tenant types. To avoid ambiguity, the condition will be written to specify exactly who qualifies as a student.

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Commenter: Donna Hinds

Status: Individual

Date Received: January 11, 2017 and January 17, 2017

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**Comment 5-1**

The traffic study is inadequate

**Response 5-1**

See Master Response 3.

**Comment 5-2**

The noise study is inadequate; baseline noise measurements were not representative of typical conditions.

**Response 5-2**

As detailed under Section 11 and on page 42 of the IS/MND, to characterize noise levels at the Vineyard Lodge Housing Site, a Noise Study was prepared by consultants, ICF International, on June 15, 2016. Noise monitoring was conducted on the Vineyard Lodge project site to characterize existing noise levels in the project area. The Napa Wine Train was not operating during this time and the existing housing facilities were not occupied because students were on break. The measured noise levels therefore represent the lowest noise levels likely to be encountered in the area. As such, the baseline noise levels against which the project's noise contributions were analyzed served as the *most conservative* method of evaluating noise impacts of the project. The analysis was adequate and no changes are needed.

**Comment 5-3**

A parking variance should not be issued

**Response 5-3**

See Master Response 3.

**Comment 5-4**

There will be adverse visual impacts

**Response 5-4**

See Master Response 1.

**Comment 5-5**

The increased population would generate adverse impacts.

**Response 5-5**

The analysis in the IS/MND accounts for the increase in population across all impact categories, but in particular, under Section 12. Population and Housing, IS/MND pages 45-46. As stated in the IS/MND under section 12. A project will normally have a significant environmental effect if it will displace a large number of people or induce substantial growth or concentration of population. The CIA Campus Master Plan involves an expansion in student enrollment from 200 to 300 students for a net increase of 100 new students plus the addition of seven new instructional staff. Concurrently, 49 employees would relocate to the recently acquired American Center for Wine, Food & the Arts (Copia) in the City of Napa, California. The net change in student and faculty at the Greystone Campus would amount to a net increase of 58 students and staff. The Vineyard Lodge Housing would be expanded by a net total of 123 student residents. Given that the project will result in a net decrease in faculty, while providing housing for the majority of students, the project is not expected to significantly impact the existing or future housing supply in St. Helena. Similarly, given the fact that the CIA will provide dormitories sufficient to house all new students, the project would not displace existing housing or people and any impacts associated with the increase in population would be less than significant. No further analysis is therefore required.

**Comment 5-6**

There would be adverse impacts to sewer and water

**Response 5-6**

See Master Response 2.

**Comment 5-7**

There was no evaluation of alternatives which would generate fewer impacts

**Response 5-7**

Please see Master Response 5.

**Comment 5-8**

The requested setback variance contradicts the General plan policies

**Response 5-8**

The General Plan Guidelines published by the State Office of Planning and Research interpret "consistency" as follows: "An action, program, or project is consistent with the General Plan if, considering all its aspects; it will further the objectives and policies of the General Plan and not obstruct their attainment." As such, the standard for analysis used in the Initial Study IS/MND is predicated on *general* agreement with the policy language and furtherance of the policy intent (as determined by a review of the policy context).

Variances provide a limited waiver from the explicit requirements of the zoning code insofar as exceptional circumstances exist and very specific findings can be made. Variance may be granted in order to provide property owners equality of treatment from their neighbors. As detailed in Municipal Code Section 17.172.010 the purpose of a Variance is to allow variation from the strict application of the terms of this title where, by reason of the exceptional narrowness or unusual shape of a specific piece of property, or by reason of exceptional size, shape, topographic conditions or other extraordinary situation or condition of such piece of property; or because of the use or development of lands immediately adjoining such property, the literal enforcement of the

requirements of this title would involve practical difficulties or would cause undue hardship. (Prior code § 27.445).

The commenter cited General Plan policy 5.3.3 in support of their assertion that the project is inconsistent with the General Plan. That policy is as follows:

5.3.3 Preserve right of way for future collector streets within the Planning Area of the City as follows:

- Starr Avenue from Pratt Avenue to Adams Street and from the Urban Limit Line to Dowdell Lane
- Mills Lane from SR 29 to Starr Avenue, including potential realignment with Grayson Avenue at SR 2
- Oak Avenue from Vidovich Avenue to Grayson Avenue

*The City recognizes that development may or may not proceed along the lines envisioned in this plan, and that some areas not currently identified for potential development may in fact precede those that are so designated. The intent of the right-of-way preservation designation is to clearly define the interest of the City in maintaining the option for extending its collector street system into these areas. Special setback areas shall be established along collector streets to allow for future widening.*

Review of the above policy indicates that it does not apply to Pratt Avenue, but rather applies to specific portions of (1) Starr Avenue, (2) Mills Lane, and (3) Oak Avenue. As such, there is no indication that the requested variance would be in direct or indirect conflict with any goal, policy or objective of the St. Helena General Plan and that the variance may still be found to be generally consistent with the overall intent of the General Plan and policies therein. No further analysis is needed.

Last, it should be noted the determination that the proposed project or a component thereof, is consistent or inconsistent with the General Plan 2025 policies is ultimately the decision of the City of the lead agency.

#### **Comment 5-9**

The applicant does not have access rights to vineyard road.

#### **Response 5-9**

The applicant has provided a signed access agreement detailing access rights across Vineyard Road which has been reviewed and approved by the Public Works Department. No further consideration is warranted.

#### **Comment 5-10**

The project requires an Environmental Impact report given the significant size and potential impacts of the project.

#### **Response 5-10**

See Master Response 6.

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Commenter: D & S Packman  
 Status: Individual  
 Date Received: January 9, 2017

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**Comment 6-1**

*"We've lived a year with constant worker traffic and construction noise from building Los Alcobas Resort; plus, all the cars constantly shutting CIA people and parked outside this house more than just a few times a year - we counted over 40 instances."*

**Response 6-1**

Comment noted.

**Comment 6-2**

*"We had to call police because we had one girl from CIA DORMS enter our home at night and sleep partially on our couch - use our upstairs bathroom (a strange sleepwalking matter) which was horrifying."*

**Response 6-2**

The incident described above is understood to be an isolated event and not an occurrence reasonably expected to result from the proposed project. Discussion with the Police Department indicated that for the year 2016 police received a total of six (6) calls associated with Vineyard Lodge Housing. It is reasonable to assume that there may continue to be occasional incidents such as those listed below, but there is no reason to believe that they would be so significant or recurrent as to constitute a physical impact to the environment. No further consideration is warranted.

Incidents Related to Vineyard Lodge for the year 2016:

|          |                                                                                                                   |
|----------|-------------------------------------------------------------------------------------------------------------------|
| 05/07/16 | Fire Alarm Sounding, False Alarm                                                                                  |
| 06/02/16 | Vehicle burglary reported by student, report taken                                                                |
| 07/15/16 | Alarm heard in the area, security already on site, all ok                                                         |
| 10/05/16 | Fire alarm sounding, False alarm                                                                                  |
| 10/16/16 | Late report of Domestic Violence from Santa Clara PD, occurred 10/4/16 at the Dorms, report taken & charges filed |
| 12/19/16 | Agency assist at the Dorms, no details listed                                                                     |

**Comment 6-3**

*"Plus there is water running down our street constantly- I would say 70% of time we've been here, including recently before rain--such that we put the trash cans out almost every week in middle of large pool of running water, soaking our shoes each time."*

**Response 6-3**

Comment noted. This is not a project related issue and therefore will not be addressed here.

**Comment 6-4**


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*"Not complaining - just stating that enough is enough and if you add this massive project and residential facility to Pratt Ave - it's too much for the wonderful people who are paying a huge amount of money to live here expecting peace and serenity."*

**Response 6-5**

Comment noted.

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Commenter: Tom Rinaldi

Status: Individual

Date Received: January 11, 2017

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**Comment 7-1**

*"We have lived on Pratt Ave for more than 35 years, and have seen remarkable changes-many for the worse for small town living. With the remarkable expansion of Beringer, the new (UGLY) hotel at Grandview with a forgettable name on Hwy. 29, the railroad activity to Charles Krug, the waste water aromas of the ponds, the noise of the large neighborhood wineries, increased traffic, faster and faster cars coming through, the erosion of the quality of the road surface to below 3rd world countries; we have seen our neighborhood heading to hell."*

**Response 7-1**

Comments are noted; however, the concerns enumerated above are not project specific and therefore will not be addressed here.

**Comment 7-2**

*The ridiculous expansion of the dorm on Pratt Ave. will be a real nail in the crucifix. These students are people from all over the country who drive out here, do not help our local populace, waste water like tourists, leave as soon as they can, and add no value to this town.*

**Response 7-2**

Comment noted ; however, the concerns enumerated above are not project specific and therefore will not be addressed here.

**Comment 7-3**

*Finally, it appears the CIA is slowing or shutting down the Greystone Bldg. in preference for Copia, Napa. Are they going to shuttle them to Napa? Leave the CIA dorm as it is, please. If not, name it The West Coast Trump Tower!*

**Response 7-3**

As detailed in the project description on page 2 of the IS/MND, The CIA originally envisioned the campus at Greystone to operate as a continuing education facility, but it has since evolved to serve solely as an occupational educational facility offering an Associate in Occupational Studies (AOS) degree program and certificate programs. In 2004 the CIA acquired the Vineyard Lodge Housing site at 830 Pratt Avenue to support the trend towards occupational education and provide affordable housing for students. Consistent with the requirements of the City's Municipal Code, the subject sites currently have active use permits (93-105 for the Greystone Campus; 2004-33 for the

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Vineyard Lodge Housing site). Associate level classes will continue to be held at the Greystone Campus and there are no plans for a shuttle to transport Vineyard Lodge Residents to the Copia location.

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Commenter: Anthony Micheli

Status: Individual

Date Received: January 13, 2017

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#### **Comment 8-1**

*"The Crinella Pump station was built in 1965. It was only to service the Crinella subdivision of about 100 homes. Now the CIA has tied in on Pratt, all the recently built million dollar homes on Pratt with guesthouse, now the Las Alcobas hotel, with no upgrades from any of these developers. Yet the station is #8 on the list of improvements of capital expenses by the new wastewater cost increases. Why are we the residents paying for this and not the developers that are burdening the system. The CIA is going from 4750 gals/day to 10,783 gals/day in to the Crinella Pump station.*

*The enrollment was 101 students, now they want to more than double that size with 123 additional students without any impact fees or improvements to the Crinella Pump station. That is a 500% increase from the convalescent hospital capacity."*

#### **Response 8-1**

Please see Master Response 2.

#### **Comment 8-2**

*"In the report it says they want to take students out of homes they own and put them in these 3 new dormitory buildings. If that is true, then they have to provide the city with a legal document that they will sell these homes when the first dormitory is completed so these homes go back to hopefully the rental market that we desperately need. Also, their statement that their housing is affordable is not correct. I have spoken to students in their facilities and what they pay for a room is more than our rental market prices."*

#### **Response 8-2**

Comment noted.

#### **Comment 8-3**

*"Why are they able to build to 40' with these new buildings? I thought that we had a 35' height limit. These buildings are going to block the view for the neighbors of our beautiful hillsides. The view shed will be lost."*

#### **Response 8-3**

The Vineyard Lodge Housing site exhibits a zoning designation of PQP: Public Quasi Public. As detailed on page 39 of the IS/MND, The PQP zoning designation does not prescribe specific development standards, but rather stipulates that all projects within the PQP zoning district be subject to a conditional use permit and that development standards shall be established through the use permit review process. These regulations help guarantee that incompatible development and/or activities can be avoided by requiring such projects be held to a high level of scrutiny and are vetted

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through the public review process, CEQA review, and be conditioned accordingly. The Vineyard Lodge Housing Component will be subject to the provisions of a new use permit as required under PQP zoning which would govern the intensity and operation of the site to an extent that consistency with all applicable standards and guidelines is achieved. As promulgated by Zoning Code Section 17.68.050, building height is to be established in conjunction with use permit review and therefore, it is at the discretion of the Planning Commission to determine whether a 40' height is appropriate within the context of this specific project. There is however, no existing regulation or standard that would explicitly preclude a 40' height within the PQP zoning district. For a response to the concerns related to view shed impacts please refer to Master Response 1. No further analysis is warranted.

#### **Comment 8- 4**

*"They claim they don't need additional parking. I drive by the dormitories at least 3 times per day, on average the parking lot is between 70% to 80% full most of the time. They claim they only give out 33 permits for the existing 101 students, well then who owns the other vehicles? They claim that the shuttle goes every 15 minutes. To me that adds a larger impact at Pratt and Main. Now with the Las Alcobas Hotel across the street this is a bad intersection. There needs to be a traffic study addressing this. In fact, I feel we need an electric stop lights at this intersection. Most of the day the traffic does not go out onto Main, including truck traffic. They cut through Park and on to Crinella to Main. This is a residential neighborhood they are cutting through."*

#### **Response 8-4**

Please refer to Master Response 3.

#### **Comment 8-5**

*"They are going to demo a 15,050 sqft one-story building that houses 41 students. Then they are going to build three 3 story buildings totaling 40,645 and claim there is no impact. Who are they trying to fool? The Planning Commission needs to say: We need time to assess the full impact of this project. We have been told over and over again about our ageing infrastructure that is in dire need of repair. We need to find out first the impact the Las Alcobas Hotel is going to have in this area. An environmental impact report is the only way to address all the concerns I have raised."*

#### **Response 8-5**

See Master Response 6.

#### **Comment 8-6**

*"Originally the CIA was going to build three dormitories on the school's campus. This was so they would not impact the neighborhoods. That did not happen as promised in their original use permit. I would suggest the CIA instead of building these new dormitories on Pratt Av to put them on their campus as they originally proposed. The CIA owns the adjacent property. I personally worked Chuck Carpy's house as a general contractor. The city should rezone the property so dormitories can be built there. Then you eliminate all traffic problems, all view shed issues and since they are reducing their water usage at Greystone the increase of the dormitories can be applied. Plus the city should require these dormitories not use the city's wastewater system but put it in to Greystone's system that discharges in to the pond on Deer Park Road."*

#### **Response 8-6**



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Comment Noted. Please see Master Response 5 in regards to the evaluation of project alternatives.

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Commenter: Dianna Varozza

Status: Individual

Date Received: January 17, 2017

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#### **Comment 9-1**

*In regards to the Pratt Avenue project... It should be separate from the Greystone site paperwork. Trying to read through this is too difficult to determine what is going on at which site. They should be separate applications as they are different locations on different streets.*

#### **Response 9-1**

The City did receive multiple entitlement applications and the entitlements will be considered individually. However, under CEQA, projects may not be piecemealed (segmented) so as to ensure that all potential impacts are captured. Given that the use of Greystone and Vineyard lodge are so intimately tied it was determined that both components should be considered together. Accordingly, no changes are warranted.

#### **Comment 9-2**

*Is there going to be a stop light at Pratt and Main?*

#### **Response 9-2**

As detailed in the Traffic Analysis, the significance criterion established by the 1993 St. Helena General Plan and applicable to the subject project reads, *"All unsignalized intersections must maintain LOS C. If the LOS degrades below LOS C, an evaluation of the need for traffic signalization shall be undertaken according to standard Caltrans signal warrants as described below. If signals are not initially warranted, the location shall continue to be monitored for signal warrants on a regular basis."*

In accordance with the significance criteria applicable to the project, a warrant threshold analysis was undertaken to determine the need for signalization. There are 9 possible tests for determining whether a traffic signal should be considered for installation. As detailed on page 9 of the traffic Study (**Appendix Q**) These tests, called "warrants", consider criteria such as actual traffic volume, pedestrian volume, presence of school children, and accident history. The intersection volume data together with the available collision histories were compared to warrants contained in the Manual on Uniform Traffic Control Devices (MUTCD), Federal Highway Administration, 2014, California Supplement. As stated in the Traffic Impact Report and on page 52 of the IS/MND, signal warrant thresholds were *not* met and therefore signalization is not needed and no signal will be installed as a result of this project.

#### **Comment 9-3**

*I definitely object to a three story building. Nothing else directly on the street is that tall and if you set precedence now pretty soon there will be three story apartment buildings and homes. This is a quiet street mostly agricultural and it is very dangerous during going work and home hours. Between Beringer employees racing to get to the trail and all of the construction workers parking on*

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*Pratt and Main it has been a nightmare trying to pull out of the driveway or onto Main. More people used to walk on Pratt but now they are afraid.*

**Response 9-3**

See Master Response 1 and 4.

**Comment 9-4**

*"Where are all the construction workers going to park when they are working on this project? The garbage, pour parking jobs, construction trucks and deliveries have been chaos. The construction workers whip a u turn without looking and almost hit moving traffic. They block the view so pulling out onto main can be dangerous. They are trying to cross the street and almost get hit by cars. And now with Pratt closed why there isn't an officer there directing traffic. We can't even pull out and go to the store. It looks terrible having all those vehicles parked everywhere, delivery trucks, construction equipment. This all needs to be kept off Pratt Avenue."*

**Response 9-4**

As detailed on page 5 of the IS/MND, construction activities at the Vineyard Lodge Housing site are expected to occur in two overlapping phases following issuance of entitlements, Phase 1: January 2017 to August 2017 and Phase 2: June 2017- January 2018. Specific dates are subject to change, but the general phasing is expected to be consistent with what was assumed in the IS/MND. The applicant has indicated that construction staging would be located on site and in the proposed courtyard; site preparation and demolition staging is expected to occur on the existing parking lot. In order clarify this in the IS/MND; the project description will be updated to read:

**PROJECT PHASING**

Construction activities at the respective project sites are expected to commence following issuance of entitlements and will be phased in a manner that limits disturbance to class schedules and curriculum and in accordance with the phasing plan, below. Site preparation and demolition staging will occur on the existing parking lot and Construction phase staging will be located in the proposed courtyard between the new building and the existing Vineyard Lodge 1 for both phases.

**Comment 9-5**

*All of the dust created by construction is damaging to vineyard. If we get even a small amount of dust blowing we will have to get our lawyers involved. What are you going to do to mitigate the dust? I am just glad we weren't closer to the hotel construction. What a nightmare for the pour people on the corners.*

**Response 8-5**

As detailed on page 19 of the IS/MND and under section 3(D), the subject site is proximate to sensitive receptors, defined as those members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly and people with illnesses...Due to the proximity of sensitive receptors onsite, the project has the potential to generate temporary air quality impacts associated with fugitive dust emissions during construction activities.

In order to ensure that fugitive dust emissions are reduced to levels below significance Mitigation Measure AQ-1 would be implemented. AQ-1 is set forth pursuant to BAAQMD Basic Control Strategies and requires covering haul trucks, watering during active ground disturbance, limiting idling time, proper maintenance of equipment, and other standard measures. With implementation

of AQ-1 potential impacts to sensitive receptors during construction will be reduced to levels below significance. Specifically, AQ-1 stipulates that:

The applicant shall incorporate Best Management Practices for all construction activities and clearly indicate these provisions in the specifications. In addition an erosion control plan shall be prepared and submitted to the City of St. Helena prior to any construction activity. BMPs shall include but not be limited to the BAAQMD Basic Construction Mitigation Measures as modified below:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered three times per day;
2. All haul trucks transporting soil, sand, or other loose material shall be covered;
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited;
4. All vehicle speeds on unpaved roads shall be limited to 15 mph;
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible;
6. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used;
7. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points;
8. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation;
9. Construction equipment staging shall occur as far as possible from existing sensitive receptors;
10. The Developer shall designate a person with authority to require increased watering to monitor the dust and erosion control program and provide name and phone number to the City prior to issuance of grading permits. Post a publicly visible sign with the telephone number of designated person and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations; and
11. The City's Public Works Inspector shall perform visual inspections during grading to assure that dust control is implemented and standard BMP are enforced.

With implementation of AQ-1 and compliance with the provisions of the St. Helena Municipal Code potential impacts associated with fugitive dust and which could affect people or vineyards would be less than significant. No further analysis is therefore warranted.

#### **Comment 9-6**

*I would like an answer as to what we can do to stop the three story building and regulate the construction site parking and deliveries to be off Pratt. I am mostly concerned about the construction dust which will damage vineyards nearby. We are directly on the other side of the Beringer strip. They must be concerned about dust on their new block of vineyard.*

#### **Response 9-6**

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As stated above, under Response 9-4, construction staging will be located within the project site boundaries. For discussion of fugitive dust, please see Response 9-5.

**Comment 9-7**

*We live here and have guests at our winery and it needs to not look like a dump driving down Pratt Avenue.*

**Response 9-7**

Comment noted.

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Commenter: Carol Norfleet

Status: Individual

Date Received: January 18, 2017

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**Comment 10-1**

*My personal opinion is that the retirement home that was the original structure on the property should never have been changed to a dormitory for Culinary Institute students. I believe that if the CIA wants to have more students they should either construct a property on their Greystone campus on Highway 29 or build a new dormitory near the former Copia site in the city of Napa.*

**Response 10-1**

Comment noted.

**Comment 10-2**

*I believe the impact on Pratt Avenue and subsequent impact for the city of St. Helena all produce negative effects. Pratt Avenue is one of the poorest maintained streets in St. Helena. There are constant potholes in the road that are not properly repaired, the entire road needs repaving, there are no sidewalks, despite the fact that there is a CIA student bus that makes innumerable trips up and down the road there still are students regularly walking on the side of the road often in predawn and night hours creating a very dangerous situation. They are unable, generally, to walk on the traffic facing side of the street because at least six months of the year there is a stream of water running down the south side of the street that is emitted from a sump pump at the residence at 1055 Pratt Ave.*

**Response 10-2**

See Master Response 3.

**Comment 10-3**

*I strongly feel that the city either needs to create a storm drain to properly capture that water or to eliminate the exception that must've been created for dumping this sump pump water into the street. I will also note that despite the fact that rains stop in the area in the late winter that particular residence is in essence creating an artesian well in the full basement that pumps water seasonally into June creating a marsh and mosquito habitat at the intersection of Pratt Avenue and the railroad*

*tracks. It seems that every other street in St. Helena has proper gutter sidewalks and storm drains adjacent to residential homes except for this stretch of Pratt Avenue.*

**Response 10-3**

Comment noted. This comment does not relate to the subject project and therefore will not be addressed here.

**Comment 10-4**

*In examining the site plan for the new dormitory it's very clear that every single square foot of land is being used, packing on as much density as possible, exceeding height restrictions and visual sensibilities. There should not be a variance for building setback as proposed from 36 feet to 20 feet. Additionally the site plan has the exit from the plan coming directly into the intersection for the railroad tracks that are now being used for a wine train going up to Krug winery. A portion of the building is 40 feet high which is certainly not conducive to the rural nature of what this street is and clearly will affect other property owners in the area from a view point of view.*

**Response 10-4**

Comment noted. See Master Response 1 for a discussion of viewshed impacts.

**Comment 10-5**

*Despite the fact that there is a shuttle that goes to the Greystone campus it is inevitable that 123 new students are going to create much more traffic. I'd like to point that out several years ago there was a multiple fatality accident on Pratt at the end of the road involving some of the students from Greystone. It seems inevitable that doubling the size of the facility is going to significantly impact traffic use and noise on our street. This traffic impact also becomes immediately significant as one looks at the current extreme difficulty of making a left-hand turn from Pratt Avenue south on to Highway 29. It is currently extremely difficult to see what is approaching on the left-hand lane because of parked cars, at the very least the curb needs to be red painted at least six car lengths back from where it is now. Additionally with the pending opening of the Los Alcobas Hotel there will be additional significant difficulty in entering and exiting from Pratt Avenue. This will not only apply to the student buses but also to the students that would be coming and going from this dormitory. This currently is and will become a much more dangerous intersection certain to create accidents.*

**Response 10-5**

Comment Noted. It is expected that as a part of mitigation imposed on the Los Alcobas hotel project, parking will be prohibited along both sides of Main Street for a distance of 250 feet south of the Los Alcobas Hotel site, thereby improving site distance when making a left-hand turn from Pratt Avenue onto Main Street.

**Comment 10-6**

*We are all aware of some of the economic issues facing the city of St. Helena and clearly one way to solve them is to promote the development of architecturally appropriate high quality hotels that will attract individuals with the capability to afford a significant average daily rate and quality that would then provide subsequent TOT revenue to the town. What this proposal does instead is create a hotel with insignificant TOT from students who certainly are not going to significantly support high quality restaurants and retail shops within the city itself.*

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**Response 10-6**

Comment noted. Potential impacts to TOT revenue is not a potential environmental impact which is required to be analyzed pursuant to CEQA.

**Comment 10-7**

*As stated earlier our belief is that there should not be a variance for an expansion of the existing student housing facilities, instead CIA should examine other locations including their existing Greystone campus and or their new Copia campus in Napa to effectuate the expansion of their overall programs. Pratt Avenue should remain a rural and residential street not a street of student dormitories creating additional traffic noise water and sewer impacts with insignificant benefits for the existing residents of the street and the city of St. Helena.*

**Response 10-7**

Comment noted. As detailed in the IS/MND under Section XV11. Mandatory Findings of Significance, with implementation of mitigation measures set forth under Aesthetics, Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Land Use, Noise, and Transportation, the project's potential impacts would be avoided or reduced to levels below significance. Therefore, the project will have less than significant impacts due to degradation of the environment.

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Commenter: Paul Bertoli

Status: Individual

Date Received: January 19, 2017

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**Comment 11-1**

*"...Turning this project surrounded by ag land into the most densely populated parcel in St Helena, would seem to be totally against the will of the general plan. The plan frowns upon putting high/medium density in ag land(leapfrogging)"*

**Response 11-1**

As detailed on IS/MND page 39 and under section 9(b), the Vineyard Lodge Housing site exhibits a General Plan land use designation of Agriculture, which provides for, amongst other things, Public and Quasi-Public uses. In 2008 and per Resolution No. 2008-5, the Vineyard Lodge Housing site was rezoned from A-20:Twenty Acre Agriculture to PQP: Public Quasi Public. The Council found that this was an appropriate action based on the following findings enumerated in the Resolution:

1. The existing urban/developed condition of the parcel would make conversion to agriculture difficult.
2. The small size of the parcel (2.61 acres) makes it improbable that the land can be converted to an economically viable agricultural parcel.
3. The parcel has been in urban use for the last 40 years.
4. The parcel has not been farmed or agriculturally productive for the last 40 years.
5. The parcel is already served by City services (water & sewer).
6. Rezoning the parcel to PQP keeps the existing A-20 zoning ordinance language intact, does not introduce new uses to agricultural parcels, thereby lessening the possibility that other agricultural land will be used for non-agricultural purposes.

The proposed project does not propose any zoning map amendments and proposes development consistent with the existing PQP zoning of the subject parcel which it has exhibited since 2008. As described on page 39 of the IS/MND, The PQP zoning designation does not prescribe specific development standards, but rather stipulates that all projects within the PQP zoning district be subject to a conditional use permit and that development standards shall be established through the use permit review process. These regulations help guarantee that incompatible development and/or activities can be avoided by requiring such projects be held to a high level of scrutiny and are vetted through the public review process, CEQA review, and be conditioned accordingly. The Vineyard Lodge Housing Component will be subject to the provisions of a new use permit as required under PQP zoning which would govern the intensity and operation of the site to an extent that consistency with all applicable standards and guidelines is achieved. No changes are warranted.

**Comment 11-2**

*"This will also add to the current traffic problem on Pratt, the new resort, wine train, Beringer/ treasury, ramping up production, redirection of traffic by apps,(waze, google, etc) the constant shuttles, will only add to the problem."*

**Response 11-2**

See Master Response 3.

**Comment 11-3**

*"Water& sewer issues, seeing hundreds of new toilets, while residents conserve water only to have the water rates skyrocket, just doesn't quite seem right."*

**Response 11-3**

As described herein and on page 56 of the IS/MND, The City of St. Helena provides water to both the Greystone Campus (2555 Main Street) and Vineyard Lodge Housing Site ( 830 Pratt Avenue). The current water allotments authorized by the Agreements allocate an average of 15,900gpd to Greystone and 4,750gpd to the Vineyard Lodge Site. The total allotment across the two sites amounts to an average of 20,650 gpd or 23.1 acre feet per year. As part of the CIA Master Plan project, the applicant is requesting to rescind the two separate agreements and adopt a new joint water agreement which would redistribute the gross water allotment across the two sites while maintaining the current total allotment of 23.1 AF per year. As such, *no* net increase in water use is proposed and the project will comply with the City's water neutrality requirements. No further analysis is needed.

**Comment 11-4**

*"The CIA doesn't allow student cars on campus, or want to rent homes in SH, this shouldn't be the resident's problem. People actually live here. I'm not so sure what this nonprofit, or not for profit status is, but I would suggest that they consider using only the facility they've already expanded .The community trusted it was all they needed. With our population at 4900 I would prefer seeing a reduction in enrollment, and a modest tuition increase, in order for the CIA to remain good neighbors."*

**Response 11-4**

Comment Noted.

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Commenter: Priscilla Dell  
Status: Individual  
Date Received: January 23, 2017

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**Comment 12-1**

*"They propose using groundwater. Although our aquifer is most likely adequately charged due to the recent rains it will not remain in that condition. This dormitory will be there for an undetermined length of time during which we will have the return of drought. We need our water for residents who live here and the industry that supports our economy. We are told that our wastewater system will require millions to bring it up to code. Why should we add this type of burden to the system?"*

**Response 12-1**

See Master Response 2.

**Comment 12-2**

*"The Culinary Institute relocated to Napa the only business that brought any revenue into our City namely their restaurant. Why should we the citizens be asked to share our precious water resource while they bring absolutely nothing to the community? No, I don't believe that closing the restaurant will balance out having 224 students taking showers and other domestic uses."*

**Response 12-2**

Comment noted.

**Comment 12-3**

*The height of the buildings will be offensive to nearby neighbors.*

**Response 12-3**

See Master Response 1.

**Comment 12-4**

*"This particular area of the City is already suffering from too much traffic and too little planning such as an additional stoplight at Pratt and Main."*

**Response 12-4**

See Master Response 3.

**Comment 12-5**

*"Why should they be allowed to build on agricultural land? This is seldom allowed to happen and why should it be allowed in this instance when they bring nothing of value to the community?"*

**Response 12-5**

See response 11-1.



### 3. REVISIONS TO THE IS/MND

- *The following changes to the language included in Sections 16(a) and 16(b) and on page 16 of the IS/MND, will be made, as shown, below:*

A. **(Exceed Wastewater Treatment Requirements)** Less Than Significant Impact: The project is not expected to exceed wastewater treatment requirements set forth by the Regional Water Quality Control Board. To accommodate wastewater flows generated at the Greystone Campus, the existing onsite primary treatment would be used, including one 3,000 gallon grease interceptor, two 7,500 gallon settling tanks and one 6,000 gallon settling tank, and a pump sump and pump to convey the SS flows to the Markham Combined Wastewater System (MCWS) located at Markham Winery on SR 29, north of St. Helena. Improvements to the existing dishwashing and other kitchen facilities, including replacement with more water and energy efficient equipment, in addition to the closure of the WSGR would reduce the overall water and wastewater demand for the site. Taken together, the proposed improvements will lead to a net decrease in flows conveyed and treated at the MCWS and will be within the authorized discharge amount of 14,850 gpd.

At the Vineyard Lodge Housing site, wastewater will be generated by dormitory restrooms, showers, and common areas. The project will utilize the existing sanitary sewer (SS). Effluent would undergo primary treatment in septic tanks and then be conveyed to the municipal sewer system through the existing 3" SS. The SS management system will be resized to accommodate a peak daily wastewater flow of approximately ~~9,520~~ 9,605 gallons per day (gpd) which equates to a projected net increase of ~~1,960~~ 3,232 gpd over the existing ~~capacity~~ average recorded flow of 6,373. Effluent will undergo primary treatment in septic tanks, which will produce effluent that is of higher quality than residential wastewater. A new equalization pump tank will be used to collect and store effluent. The equalization tank will provide approximately 12.5 hours of retention time at the anticipated peak daily flowrate of 9,520 gpd, and is sufficiently sized to allow for only off-peak discharge to the City's sewer system. The equalization pump will utilize on site storage capacity and equivalent pumps to maintain the same instantaneous peak flow discharge as the existing facility. As a result, there will be no increase to the instantaneous flow rate to the City sewer system and therefore no adverse effect on the sewer system capacity. No increases in peak flows are proposed to the City sewer system, and the timed dosing of primary treated effluent during off-peak hours would prevent any adverse impacts to the City sewers.

The wastewater flows will be conveyed to the City of St. Helena Wastewater Treatment Plant, which has sufficient operating capacity to handle the additional flows generated at the Vineyard Lodge Housing site. Further, the project will be assessed the sewer impact fee which will help to maintain the existing system and contribute to the additional costs that will be incurred with the future expansion and upgrade of the wastewater treatment plant. Therefore, the project would not exceed wastewater treatment requirements and impacts would be less than significant.

**b.(New Wastewater treatment Facilities)** Less Than Significant Impact: There would be no new construction or expansion of domestic water or wastewater facilities as part of the proposed project. For the Greystone Campus, as stated above, wastewater flows are expected to decrease following project implementation. For the Vineyard Lodge Housing

site, as stated above, the project would result in a net increase of ~~1,960~~ 3,232 gpd of wastewater over existing flows. However, the City of St. Helena Wastewater Treatment Plant has sufficient operating capacity to handle the additional flows generated at the Vineyard Lodge Housing site. Further, a sewer impact mitigation fee will be assessed with the purpose of ~~maintaining~~ improving the existing system and to contribute to offset costs of future expansion and upgrade of the wastewater treatment plant. The sewer impact fee will be assessed against the dormitory project at the time of issuance of building permits, therefore, impacts would be less than significant

**b.(New Wastewater treatment Facilities)** Less Than Significant Impact: There would be no new construction or expansion of domestic water or wastewater facilities as part of the proposed project. For the Greystone Campus, as stated above, wastewater flows are expected to decrease following project implementation. For the Vineyard Lodge Housing site, as stated above, the project would result in a net increase of ~~1,960~~ 3,232 gpd of wastewater over existing flows. However, the City of St. Helena Wastewater Treatment Plant has sufficient operating capacity to handle the additional flows generated at the Vineyard Lodge Housing site. Further, a sewer impact mitigation fee will be assessed with the purpose of maintaining the existing system and to contribute to offset costs of future expansion and upgrade of the wastewater treatment plant. The sewer impact fee will be assessed against the dormitory project at the time of issuance of building permits, therefore, impacts would be less than significant\

- *The following changes to the language included on paragraph 1 page 5 of the IS/MND, will be made, as shown, below:*

#### PROJECT PHASING

Construction activities at the respective project sites are expected to commence following issuance of entitlements and will be phased in a manner that limits disturbance to class schedules and curriculum and in accordance with the phasing plan, below. Site preparation and demolition staging will occur on the existing parking lot and Construction phase staging will be located in the proposed courtyard between the new buildings and the existing Vineyard Lodge 1 for both phases.

- *Since the release of the IS/MND, the applicant has requested minor modifications related to the size of the storage units proposed as part of the Greystone component. Namely, the applicant has proposed slightly larger storage units ranging in size from 622 sf to 1,337 sf. The proposed changes have been reviewed and would not introduce any new impacts or change the conclusions of the IS/MND. To reflect these technical changes, the following revisions will be made to Sections pages 4,12 and 25, of the IS/MND and as shown below:*

*Project Description, Paragraph 1, page 4.*

The proposal further includes the construction of a 4,468-square-foot (sf) storage cave at the north end of the Greystone Cellars building, beneath the former WSGR. In addition, a series of three modular storage units ranging in size from approximately ~~592 sf to 944 sf~~ 633 sf to 1,337 sf would be installed at the rear of the third floor of the Greystone Cellars building. Given that the majority of works is confined to the interior of the building, exterior changes would be very limited. Any work that may affect the exterior of the historic Greystone Cellars building (i.e. modular units) would be installed in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties so as to avoid impacting the building's historic integrity.

*Aesthetics, Setting, Page 12.*

The Greystone property is located on the west side of Highway 29 and features the historic Greystone Cellars (c.1888) a masonry building designed in the Richardsonian Romanesque architectural style. The Greystone property is highly visible and situated at the northern gateway to the City. Exterior modifications proposed for the Greystone building are limited to the introduction of a 4,468 square foot storage cave, which will be accessed from the loading dock retaining wall and not readily visible from the primary elevations, and the introduction of three modular storage units at the building rear which would be accessed via the existing roadway. The modular units will range in size from ~~592 sf to 944 sf~~ 633 sf to 1,337 sf and measure approximately 9'8" in height. The units will be located at the rear of the west elevation and supported on new structures that span across the existing exterior breezeway in a similar manner as the support structures used for HVAC units. The units will sit below the existing roof eave and will be utilitarian in nature and feature painted metal siding and doors with a flat roof shielded by a small parapet.

*Cultural Resources, Impact Analysis, Criterion A, Page 25.*

a) (Historic Resources) Less than Significant: The proposed work at the Greystone Site is confined to the Greystone Cellars building, along the west elevation and below the north end of the building. Three modular units ranging in size from ~~592 sf to 944 sf~~ 633 sf to 1,337 sf are proposed on the west elevation (rear) of the building. The units will be accessed from an existing roadway, supported on new horizontal steel structure that spans the area and similar to existing modern mechanical equipment supports. Utilitarian in nature, the units are constructed of painted metal siding, doors, and flat roofs behind shallow parapets.

- ***The following changes to the language included on the last paragraph of page 39 and in Section 9(b) of the IS/MND, will be made, as shown below:***

...In addition, the project has requested a variance from the parking standards outlined in Municipal Code Section 7.124.30(A.3) and stipulated for "rooming, boarding, or lodging houses" (determined to be the closest applicable land use identified in the zoning code), which require two spaces for the "resident owner" and one space for each guest room ~~bed~~, for a total of ~~226~~ 175 parking spaces based on this requirement for the gross total of 173 rooms (224 dormitory beds) which would result at the Vineyard Lodge Housing Site. At present, the site features 85 parking spaces, but based on data provided by the applicant, only 31% of students have a demand for parking spaces. As described herein, the CIA provides a shuttle service to students for transport to and from the Vineyard Lodge to Greystone, as well as transport offsite. Staff, including cleaning and maintenance staff, are shared by both sites and as such, staff typically park at the Greystone site and are shuttled to the

**4. SUMMARY**

In the course of preparing the written responses, information was generated and is presented throughout this document. The City of St. Helena carefully reviewed the information developed through the responses-to-comments process and determined that the project does not meet any of the conditions under CEQA Section 15073.5, as outlined below.

**15073.5. RECIRCULATION OF A NEGATIVE DECLARATION PRIOR TO ADOPTION.**

- a) A lead agency is required to recirculate a negative declaration when the document must be substantially revised after public notice of its availability has previously been given pursuant to Section 15072, but prior to its adoption. Notice of recirculation shall comply with Sections 15072 and 15073.

- b) A “substantial revision” of the negative declaration shall mean:
- 1) A new, avoidable significant effect is identified and mitigation measures or project revisions must be added in order to reduce the effect to insignificance, or
  - 2) The lead agency determines that the proposed mitigation measures or project revisions will not reduce potential effects to less than significance and new measures or revisions must be required.
- c) Recirculation is not required under the following circumstances:
- 1) Mitigation measures are replaced with equal or more effective measures pursuant to Section 15074.1.
  - 2) New project revisions are added in response to written or verbal comments on the project's effects identified in the proposed negative declaration which are not new avoidable significant effects.
  - 3) Measures or conditions of project approval are added after circulation of the negative declaration which are not required by CEQA, which do not create new significant environmental effects and are not necessary to mitigate an avoidable significant effect.
  - 4) New information is added to the negative declaration which merely clarifies, amplifies, or makes insignificant modifications to the negative declaration.
- d) If during the negative declaration process there is substantial evidence in light of the whole record, before the lead agency that the project, as revised, may have a significant effect on the environment which cannot be mitigated or avoided, the lead agency shall prepare a draft EIR and certify a final EIR prior to approving the project. It shall circulate the draft EIR for consultation and review pursuant to Sections 15086 and 15087, and advise reviewers in writing that a proposed negative declaration had previously been circulated for the project.

Therefore, the recirculation of a revised IS/MND or the preparation of an Environmental Impact Report (EIR) is not required. Consistent with the CEQA Guidelines, the added information clarifies the information and analyses in the IS/MND.

The City of St. Helena will consider the proposed IS/MND, together with this Response to Comments document, prior to approving the project.

**CITY OF ST. HELENA PLANNING COMMISSION**

**RESOLUTION PC20xx-xx**

**RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF ST. HELENA  
ADOPTING A MITIGATED NEGATIVE DECLARATION AND MITIGATION  
MONITORING AND REPORTING PROGRAM FOR THE CULINARY INSITUTE OF  
AMERICA CAMPUS MASTER PLAN AND GRANTING APPROVAL OF DESIGN  
REVIEW AND A USE PERMIT FOR 2555 MAIN STREET AND GRANTING APPROVAL  
OF A DEMOLITION PERMIT, DESIGN REVIEW, USE PERMIT, AND VARIANCES FOR  
830 PRATT AVENUE IN THE CITY OF ST.HELENA, CALIFORNIA**

**PROPERTY OWNER:** CULINARY INSTITUTE OF AMERICA

**APN:** 009-010-024  
and 009-131-003

**Recitals**

1. **Whereas**, The Culinary Institute of America submitted an application for Design Review and Use Permit approval to expand student enrollment to 300 students, introduce storage cave, and three modular storage units at the Greystone Campus at 2555 Main Street (APN.009-131-003); and
2. **Whereas**, The Culinary Institute of America also submitted an application for a Demolition Permit, Design Review, Use Permit, and Variances to expand the student housing at the Vineyard Lodge Housing Site at 830 Pratt Avenue (APN. 009-010-024); and
3. **Whereas**, Pursuant to CEQA Guidelines Sections 15072 and 15073, a Draft Mitigated Negative Declaration and included Initial Study was circulated for public review and comment from December 9, 2016 until January 23, 2017; and
4. **Whereas**, the Initial Study/Mitigated Negative Declaration concluded that implementation of the Project could result in a number of potentially significant effects on the environment and identified mitigation measures that would reduce the significant effects to a less-than-significant level; and
5. **Whereas**, in connection with the approval of a project involving the preparation of an initial study/mitigated negative declaration that identifies one or more significant environmental effects, CEQA requires the decision-making body of the lead agency to incorporate feasible mitigation measures that would reduce those significant environmental effects to a less-than-significant level; and.
6. **Whereas**, whenever a lead agency approves a project requiring the implementation of measures to mitigate or avoid significant effects on the environment, CEQA also

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requires a lead agency to adopt a Mitigation Monitoring and Reporting Program to ensure compliance with the mitigation measures during project implementation; and

7. **Whereas**, The Planning Commission of the City of St. Helena, State of California, considered the project, staff report, and all testimony, written and spoken, at a duly noticed public hearing on February 21, 2017.
8. **Whereas**, A public notice was published in the St. Helena Star and mailed to residents and occupants within 500 feet of the project site and in compliance with state and local law; and
9. **Now, therefore** let it be found that, the Planning Commission adopts the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program, and approves the requested Use permit and Design Review for 2555 Main Street and approves the Demolition Permit, Design Review, Use Permit, and Variances for 830 Pratt Avenue on the following basis:

#### **Resolution**

1. In making the findings in this Resolution, the Planning Commission relied upon and hereby incorporates by reference all of the documents referenced in this Resolution and the associated staff report, City files for this matter, correspondence, presentations and other materials.
2. **CEQA Findings**
  1. The Planning Commission has independently reviewed and analyzed the Initial Study/Mitigated Negative Declaration and other information in the record and has considered the information contained therein, prior to acting upon or approving the Project,
  2. The Initial Study/Mitigated Negative Declaration prepared for the Project has been completed in compliance with CEQA and consistent with state and local guidelines implementing CEQA,
  3. On the basis of the whole record, there is no substantial evidence that the Project as designed, conditioned, and mitigated, will have a significant effect on the environment.
  4. The Initial Study/Mitigated Negative Declaration represents the independent judgment and analysis of the City as lead agency for the Project.
3. **2555 Main Street Findings and Conditions of Approval**
  - A. **DESIGN REVIEW.** The Planning Commission finds that The Greystone Campus is historically significant as a good example of the late nineteenth century Richardsonian Romanesque architecture in California and provides a tangible link to the Napa Valley's historical viticultural operations of the last century. All project activities are either confined to the interior of buildings or less visible areas of the property such that any changes are not readily visible from main viewing areas. The exterior modifications proposed for the subject include the introduction of three new modular storage units at the rear of the property. The introduction of the proposed modular units would be reversible and their removal in the future would not affect

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the historic integrity of the building. Given the very limited design changes and for the reasons described below, the project is found to be generally consistent with the design review requirements. As such, the Planning Commission determines the project is in compliance with the following Design Review criteria of Municipal Code Section 17.164.030:

1. Consistency and compatibility with applicable elements of the general plan;  
*As proposed the project will facilitate the continued use of the historic Greystone building and in doing so would preserve the historic resource as a valuable piece of St. Helena's heritage. As such, the project would be consistent with GP Policies, 2.6.30, 4.8.1, 4.8.2. Further, the Culinary Institutes' emphasis on food and wine education promotes the Valley's reputation of a world class destination for wine and the culinary arts. As such, the proposed project exhibits overall consistency with all applicable General Plan goals, policies, and objectives.*
2. Compatibility of design with the immediate environment of the site;  
*No exterior changes are proposed that would alter the design of the building or site.*
3. Relationship of the design to the site;  
*The design will greatly limit changes visible on the building exterior; for example, the proposed modular units will be located at the building's rear and not readily visible from public viewing areas. As such, the relationship of the design to the site is appropriate.*
4. Determination that the design is compatible in areas considered by the board as having a unified design or historical character;  
*All work will be performed in accordance with the Secretary of the Interior's Standards and will be consistent with the historic character of the subject site.*
5. Whether the design promotes harmonious transition in scale and character in areas between different designated land uses;  
*No substantial changes are proposed that would alter the existing scale or character.*
6. Compatibility with future construction both on and off the site;  
*No exterior changes are proposed that would alter compatibility with future construction on or off site.*
7. Whether the architectural design of structures and their materials and colors are appropriate to the function of the project;  
*The proposed modular units will be of simple design and materials which will ensure their functionality while also limiting changes to the visual environment.*
8. Whether the planning and siting of the various functions and buildings on the site create an internal sense of order and provide a desirable environment for occupants, visitors and the general community;

*The majority of changes are confined to the interior of the existing Greystone building and therefore would not alter the existing site configuration or overall functionality of the site. The proposed modular units and storage cave would be located conveniently with connectivity to the internal uses they serve. As such, proposed changes would be functional and would limit changes to the visual environment of the site.*

9. Whether the amount and arrangement of open space and landscaping are appropriate to the design and the function of the structures;

*No open space or landscaping is proposed as part of this project.*

10. Whether sufficient ancillary functions are provided to support the main functions of the project and whether they are compatible with the project's design concept;

*The project includes modular storage units and storage cave that will support the Culinary school use of the site. The ancillary components are either shielded from view, in the case of the modular units, or underground and not visible, in the case of the storage cave. Given the limited visibility of both components, they are expected to be compatible with the overall design of the Greystone property.*

11. Whether access to the property and circulation systems are safe and convenient for pedestrians, cyclists and vehicles;

*No changes to the circulation system are proposed.*

12. Whether natural features are appropriately preserved and integrated with the project;

*No changes to natural features are proposed.*

13. Whether the materials, textures, colors and details of construction are an appropriate expression of its design concept and function and whether they are compatible with the adjacent and neighboring structure and functions;

*Three modular units ranging in size from 633 sf to 1,337 sf are proposed on the west elevation (rear) of the building. The units will be accessed from an existing roadway, supported on new horizontal steel structure that spans the area and similar to existing modern mechanical equipment supports. Utilitarian in nature, the units are constructed of painted metal siding, doors, and flat roofs behind shallow parapets. The proposed modular units are located away from principal elevations, have been designed to fit below the historic eave of the building, and are minimal in size compared to the original structure. Proposed work will use materials to differentiate the additions from the historic exterior masonry. These characteristics reflect the project's compliance with the Secretary of the Interior Standards for Rehabilitation (SOISR). Given the above, the proposed new modular units are expected to be compatible with adjacent structures and functions.*

15. Whether the landscape design concept for the site, as shown by the relationship of plant masses, open space, scale, plant forms and foliage textures and colors create a desirable and functional environment and whether the landscape concept depicts an appropriate unity with the various buildings on the site;



*There is no new landscaping proposed.*

16. Whether plant material is suitable and adaptable to the site, capable of being properly maintained on the site, and is of a variety which is suitable to the climate of St. Helena;

*No landscaping is proposed.*

17. Whether sustainability and climate protection are promoted through the use of green building practices such as appropriate site/architectural design, use of green building materials, energy efficient systems and water efficient landscape materials.

*All outdated/inefficient fixtures and systems will be replaced with more efficient and environmentally friendly fixtures and as such, the project will further sustainability goals.*

- B. USE PERMIT. Pursuant to Municipal Code Section 17.168.050, the Planning Commission acknowledges that the Culinary Institute of America at Greystone endeavors to place a greater focus on occupational education. To achieve this, the applicant requests that the use permit authorize a total enrollment of 300 students, allow more flexibility in the operation of the retail store, and allow for a 58 seat student-run restaurant to replace the now closed, 190-seat Wine Spectator at Greystone Restaurant. It is determined that proposed changes do not substantially increase the intensity of the site or otherwise create an impact that would conflict with any of the requisite findings needed to approve a use permit. Accordingly, the Planning Commission makes the following Use Permit findings to support the motion to approve the use permit:

1. That the proposed use would not generate odors, fumes, dust, light, glare, radiation or refuse that would be injurious to surrounding uses or to the community.

*No significant changes in the operation of the facility will change and there is no expectation that the proposed project would generate odors, fumes, dust, light, glare, radiation or refuse beyond what is currently typical of the culinary school use. As such, operation of the Greystone Campus consistent with the proposed project would not be injurious to surrounding uses or the community.*

2. That the proposed use would not generate levels of noise that adversely affect the health, safety, or welfare of neighboring properties or uses.

*Levels of noise would be consistent with or less than existing noise levels given the reduction in events and size of the on-site restaurant.*

3. That the proposed use would not generate traffic noise in excess of the "normally acceptable" range identified in the General Plan.

*As detailed in the Traffic Impact Report, the proposed project will not cause a substantial increase in traffic trips that would cause the ambient noise level to*

*exceed the normally acceptable range. Given the limited traffic trips associated with the proposed project, the project would not cause traffic noise to noticeably increase beyond existing level or otherwise exceed normally acceptable ranges.*

4. That the proposed use would not make excessive demands on the provision of public services including water supply, sewer capacity, energy supply, communication facilities, police protection, and fire protection.

*The level of demand placed on public services will remain consistent with that which currently exists due to the introduction of more efficient fixtures and systems, adherence to the water neutrality policy, and the fact that the proposed use will continue to operate in a manner consistent with what currently exists, as a culinary school with an ancillary retail and restaurant component.*

5. That the proposed use would provide adequate ingress and egress to and from the proposed location.

*No changes to ingress/ egress are proposed.*

6. That allowing the proposed use would not conflict with the City's goal of maintaining the economic viability of a local serving economy.

*The proposed use is consistent with that which currently exists at the site and no changes are expected that would otherwise conflict with the City's goal of maintaining the economic viability of a local serving economy.*

7. That the proposed use would be compatible with surrounding land uses and would not conflict with the purpose established for the district within which it would be located.

*No significant change in use or operation is proposed and as such, the proposed use would continue to be compatible with surrounding land uses.*

8. That the proposed use would not be in conflict with the City's General Plan.

*As detailed above, the use would be consistent with all applicable General Plan policies.*

9. That the proposed use would not be injurious to public health, safety, or welfare.

*The proposed use is largely consistent with that which currently exists at the subject site and is not expected to be injurious to public health, safety, or welfare.*

10. That granting the use permit would not set a precedent for the approval of similar uses whose incremental effect would be detrimental to the City or would be in conflict with the General Plan.

*The findings related to this particular project are unique and applicable only to the CIA Campus Master Plan. There is no reason to expect that approval of this use permit would set a precedent for the approval of similar uses whose incremental effect would be detrimental to the City or would be in conflict with the General Plan.*

11. That, as demonstrated on a detailed plan submitted by the applicant, adequate off-street parking to accommodate the long term parking needs of employees and business owners and customers is available.

*No changes to parking are proposed. Students living off-site would continue to be required to utilize the shuttle for transportation between student housing and the Greystone Campus. As such, no demand that couldn't be accommodated by the existing level of parking is expected.*

12. That the capacity of surrounding streets is adequate to serve the automobile and delivery truck traffic generated by the proposed use.

*The surrounding roadways will continue to be able to accommodate automobile and truck traffic generated by the proposed project and is not expected to increase substantially beyond that which currently exists.*

- C. The Planning Commission approves the design review and use permit for the above-described project with the following conditions of approval. The project shall be in conformance with all city ordinances, rules, regulations and policies in effect at the time of issuance of a building permit. The conditions noted below are particularly pertinent to this permit and shall not be construed to permit violation of other laws and policies not so listed.

#### **Conditions of Approval**

1. Project approvals shall be vested within one (1) year from the date of final action. A building permit for the use allowed under this approval shall have been obtained within one (1) year from the effective date of this action or the approval shall expire, provided however that the approval may be extended for up to two (2) one-year periods pursuant to the St. Helena Municipal Code, Section 17.08.130, Extension of Permits and Approvals. Any request for an extension of this approval shall be justified in writing and received by the Planning Department at least thirty (30) days prior to expiration.

2. The approvals shall not become effective until fourteen (14) calendar days after approval, providing that the action is not appealed by the City Council or any other interested party within that 14-day period.
3. All required fees, including planning fees, development impact fees, residential in-lieu housing fees, building fees, toilet retrofit fees, and St. Helena Unified School District fees shall be paid prior to issuance of a building permit. Fees shall be those in effect at the time of the issuance of the building permit.
4. Upon approval of Resolution XX-XX, the Applicant shall provide the Planning Department with the Notice of Determination Fee required by Fish and Wildlife Code Section 711.4(d). The fee payment shall be made by check payable to the Napa County Clerk and in the amount required and published by the Napa County Clerk for such fee.
5. All Mitigation Measures enumerated in the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program are incorporated by reference and made conditions of approval.
6. Prior to issuance of any construction permits, these conditions of approval *and* the Mitigation and Monitoring and Reporting Program shall be included with the plan set. A copy of the approved plans shall be maintained on site when construction activities are underway.
7. Pursuant to St. Helena Municipal Code Section 17.08.110, this permit shall run with the land and shall be binding upon all parties having any right, title or interest in the real property or any part thereof, their heirs, successors and assigns, and shall inure to their benefit and benefit of the City of St. Helena.
8. The primary purpose of this review is for compliance with the General Plan and Zoning Ordinance. The property owners or their designee shall be responsible for meeting with the Building Official, Fire Inspector and or Public Works Department to review compliance with Building Codes, Fire Codes and specific Public Works Standards including fire protection systems and any applicable accessibility standards of Title 24.
9. Construction shall be in compliance with plans submitted and reviewed by the Planning Commission on February 21, 2017, except as modified herein.
10. Minor modifications to approved plans may be approved by the Planning Director insofar as they are in substantial conformance with this approval.
11. The site shall be kept clear at all times of garbage and debris. No outdoor storage is permitted.
12. A final lighting plan delineating building mounted lights shall be reviewed and approved by the Planning and Community Improvement Director prior to building permit issuance.
13. Trash bins shall not be visible from public right-of-way.
14. All plantings shall be maintained in good growing condition. Such maintenance shall include, where appropriate, pruning, mowing, weeding, and cleaning of debris and

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trash, fertilizing and regular watering. Where necessary, plantings shall be replaced with other plant materials to insure continued compliance with applicable landscaping requirements, Irrigation systems shall be maintained in sound operating condition with heads periodically cleaned and replaced when missing to ensure efficient watering and to maintain good health and vitality of landscape materials.

15. No signage is approved by this permit. A separate sign permit in compliance with the Municipal Code shall be obtained prior to installation of signage.
16. Property owners shall recognize that there exists a right to farm properties within the district and in the vicinity of the district. There is a good faith expectation that no complaints will occur regarding legal, normal agricultural activities on properties in the district or in the vicinity of the district. Such activities may include day or night disbursement of chemicals, and creation of dust, noise, or fumes.
17. In any action or proceeding to attack, challenge, invalidate, set aside, void or annul the City's approval of applicant's Project, in whole or in part, applicant shall defend, at its own expense and without any cost to the City, and with counsel acceptable to the City, and shall fully and completely indemnify and hold the City, its agents, officers, and employees harmless from and against any and all claims, causes of action, damages, costs, attorney's fees and liability of any kind, so long as the City reasonably promptly notifies the applicant of any such claim, action, or proceedings and the City cooperates fully in the defense of the action or proceedings.

#### **Planning Department Conditions**

18. As applicable, the permittee shall comply with any and all previous conditions of approval for the CIA Greystone Campus except as they may be explicitly modified by this action. To the extent there is a conflict between previous conditions of approval enumerated in any previous resolutions relating to the subject site including, but not necessarily limited to: Resolution Nos. 93-105; 96-95; 97-162; 2001-60; 2003-42; 2004-112; 2006-07; 2006-130; or 2008-76 and these conditions of approval, these conditions shall control, superseding the prior approvals with respect to any such conflict.
19. The primary use shall be that of an advanced cooking school with ancillary uses limited to (1) 58 seat student run restaurant, (1) 35 seat bakery/café and, (1) 3,100 square foot retail store subject to the conditions herein.
20. The student population shall not exceed 300 students. Students shall be limited to those enrolled an Associate, Bachelor's, Master's and/or other Certificate Degree Program.
21. Only students actively enrolled at the CIA at Greystone campus shall be allowed to use school lodging accommodations. The student's length of stay shall be commensurate with the respective degree program.

22. As an ancillary component to the bakery and pastry education program and to help students satisfy educational requirements, a Bakery/Café with no more than 35 seats may be operated within the Greystone Cellars building.
23. A restaurant may be operated within the Flavor Discovery Center (FDC) as an accessory use to the school with seating limited to a total of 58 seats, including both indoor and outdoor dining. Any outdoor dining shall be consistent with the Zoning Regulations in effect at the time of operation.
24. A 3,100 sf campus store may be operated as an accessory use to the school within the main winery building. The store shall be limited to the hours of operation of 10:00 a.m. – 7:00 p.m. Items sold at the retail store shall be directly related to the food and beverage industry or to the incidental needs of the student residents, such as toiletries and stationery. Bottled wine sales may be permitted. The store may be advertised in educational, food service, trade and Napa county newspapers of record. Site signage shall comply with the St. Helena sign ordinance. Wine tasting may occur within the store as an accessory and subordinate activity relating to the sale of wine but shall occur only during the hours the retail store is open."
25. Valet parking shall be provided for all special and community events if they are held during hours that the restaurant is open and/or when designated on-site parking is not adequate. No parking shall be permitted along Highway 29/Main Street or Deer Park Road.
26. The CIA may offer tours and limited educational experiences to the General Public so long as such activities are incidental and secondary to the primary degree and/or Certificate educational programs offered at Greystone.
27. The Applicant shall provide a Transportation Plan that describes the operation of (1) the shuttle service (2) the rental car service (3) parking permits for individual vehicles and (4) the specifics of the on-demand bike program as they relate to the Greystone Campus and Vineyard Lodge Housing Site. The Plan shall be subject to review and approval by the Planning and Community Improvement Director. A copy of the approved Transportation Plan shall be provided and kept in the hard copy and digital project file.
28. Modular Units and the underground cave shall be used for storage of products and wares used for the purposes of culinary education.
29. Prior to issuance of building permit, the applicant shall execute a Joint Water Use Agreement with the Vineyard Lodge Housing Site. The Joint Agreement shall authorize a maximum water allocation of 23.1 acre feet/year to be utilized by the two sites. The Joint Agreement shall include enforcement provisions and penalties if the allowance is exceeded in a given year.

30. Any significant change(s) to the operation of the approved use, including a change in hours of operation, intensity, or type(s) of uses shall require amendment to this use permit.

### **Public Works Conditions**

31. Approval of this project shall be subject to the requirements of, and all improvements shall be designed and constructed in accordance with, the most current version at the time of improvement plan submittal, Caltrans Standards and Specifications, the City of St. Helena Municipal Code, the St. Helena Water and Sewer Standards, the St. Helena Street, Storm Drain and Sidewalk Standards, and all current federal, state and county codes governing such improvements.
32. For any improvements outside the existing building envelope, a grading and drainage plan showing topographic data, all easements, infrastructure onsite and directly adjoining, and an erosion control plan shall be submitted for review and approval by the City Engineer prior to the issuance of a building permit. If the project entails more than 50 cubic yards of soil disturbance, 10,000 square feet of disturbance area, a cut or fill of 3 feet or more, or alteration of any drainage pattern, a grading permit shall be required.
33. A detailed Soils Investigation/Geotechnical Report shall be prepared and submitted for review. The report shall address, at a minimum, potential for liquefaction, R-values, expansive soils, seismic risk, cave wall and ceiling stability, etc. The improvement plans shall incorporate all design and construction criteria recommended in the Geotechnical Report.
34. Remodels or new construction which requires fire sprinklers shall install an appropriately-sized water service with appropriate backflow and meter devices prior to Certificate of Occupancy. Fire system calculations shall be submitted with the Grading and Drainage Plan to verify fire service lateral and meter sizing. Deferred submittals are not accepted.
35. The applicant shall be required to submit to the requirements for annual inspections of food/beverage service establishments and businesses that handle hazardous wastes for illicit stormwater discharges as required by the State National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges. The annual stormwater illicit discharge inspections are performed and invoiced by Napa County Department of Environmental Management.
36. Trash areas, dumpsters and recycling containers shall be enclosed and roofed per State and County standards to prevent water run-on to the trash area and water runoff from the area, to contain litter and trash so that it is not dispersed by the wind or run-off during waste removal. In the event that wine or food is disposed in these areas, they shall drain to the sanitary sewer system. An area drain connected to the sanitary sewer shall be installed in the enclosure area and a structural control such as an oil/water separator or sand filter shall be included. No other area shall drain

into the trash enclosure. A sign shall be posted prohibiting the dumping of hazardous materials into the sanitary sewer.

37. The applicant shall incorporate water conservation practices into the proposed project per the Water Neutrality Calculations prepared by Summit Engineering, dated October 15, 2016. Any and all non-conforming appliances and plumbing fixtures shall be removed from the premises. The water conservation requirements shall be replicated in full on the architectural plans.
38. Erosion and sediment control plans shall conform to the latest State and City codes at a minimum.
39. Grading plans shall identify off-haul routes and soil disposal sites, subject to review and approval by Public Works. All grading and spoils generated by construction of the project facilities, including cave spoils, shall be removed and/or permanently placed prior to final occupancy.
40. The Applicant shall keep adjoining public streets free and clean of project dirt, mud, materials, and debris during the construction period, as is found necessary by the City Engineer.
41. Any new and modified existing water laterals, meters and backflow prevention devices shall be required and constructed in accordance with the requirements of the City of St. Helena's Water Standards.
42. The applicant shall repair all public improvements that are damaged by the construction process in accordance with the City Water/Sewer/Street/Storm Drain/Sidewalk Standards prior to Certificate of Occupancy.
43. Existing streets being cut by new utility services will require edge grinding and an A.C. overlay per City standards, extent to be determined by the Public Works Department.
44. The applicant shall be required to obtain an encroachment permit for improvements on public right-of-ways prior to receiving a grading or building permit authorizing site work or construction activities on the site.

#### **Building Department Conditions**

45. A building permit is required for all onsite demolition, construction and/or change of occupancy.
46. The applicant will be required to comply with the codes adopted at the time the applicant applies for a building permit. At this time the City of St. Helena utilizes the 2013 Title 24 codes.



47. When submitting plans for a building permit, the plans shall include all documentation listed on the building permit application checklist.
48. The applicant shall provide a construction waste management plan with the building permit application.
49. The plans for construction shall include a checklist for compliance with the California Green Buildings Standards Code, mandatory measures. Provide a reference on the checklist indicating where the mandatory measures can be found on the plans.
50. When submitting plans, the title page shall include all information referenced on the building permit application checklist Title Page requirements.
51. Building Permit application materials and plans shall include any documentation pertaining to special loads applicable to the design and the specified section of the code that addresses the condition; special inspections for any systems or components requiring special inspection; requirements for seismic resistance; and a complete list of deferred submittals at time of application. Any deferral of the required submittal items shall have prior approval of the Building Official however deferral of fire sprinkler design is not allowed.

#### **Fire Department Conditions**

58. Fire sprinklers and fire hydrants shall be installed as required by the Fire Department

#### **4. 830 Pratt Avenue Findings and Conditions of Approval**

- A. DEMOLITION. Pursuant to Municipal Code Section 17.164.050(E), the Planning Commission finds that the Vineyard Lodge 1 (c.1960) is not eligible for listing on the California Register of Historic Resources (CRHR) and because the building is not particularly cohesive with the surrounding agricultural and residential character makes the following findings for the approval of a Demolition Permit:

1. That, based on the public record and testimony presented at a public hearing, the building is determined not to be a significant architectural or historical building.

*The applicant is requesting a permit to demolish the former Marlinda Convalescent Home and what is today known as "Vineyard Lodge 1". The building was constructed c.1960. Following review of available records, consultants, Architectural Resources Group, determined that the subject building proposed for demolition does not meet the Criteria for listing on the California Register of Historic Resources (CRHR) given that it does not exhibit architectural significance, is not associated with any significant themes or persons and is not expected to yield any information important to expand our understanding of history or prehistory. Staff concurs with this determination.*

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2. That the demolition does not eliminate elements that are required to maintain the essential character of the neighborhood.

*As a 1960s era convalescent home located in an otherwise agriculture and residential area, the building was not found to be particularly cohesive with the existing environment. Given this, it's demolition is not expected to adversely impact the essential character of the neighborhood. Accordingly, Staff finds that the demolition of the proposed building will not negatively impact a historic resource or existing visual environment.*

- B. DESIGN REVIEW. The Planning Commission determines the project's natural color palette, stepped design, retention of existing trees adjacent to the public right-of-way and the addition of new trees will be compatible with the surrounding character along Pratt Avenue and limit visual impacts such that it would be in compliance with the following Design Review criteria enumerated in Municipal Code Section 17.164.030, and as follows:

1. Consistency and compatibility with applicable elements of the general plan;

*As stated above, the subject project is consistent with General Plan policies 4.3.4, 2.6.2, 2.6.4, 2.6.5 and HE 1.5, 2.1, 2.2, and 2.6 in that the project would consist of infill on an already developed site, would occur in a logical and orderly manner proximate to urban services, and would be of a size and design that is consistent with existing site development. Further, the site would not encroach into or otherwise hinder agricultural activities in the vicinity of the subject site. As a previously developed site within approximately one mile of the Greystone Campus, the project location at 830 Pratt is well suited to accommodate student housing at a higher density and provide a creative solution to the need for affordable student housing. As such, the project is determined to exhibit overall consistency with the intent of the General Plan and Housing Element.*

2. Compatibility of design with the immediate environment of the site;

*The project site is situated at the northern border of St Helena's urban limits where medium density housing development is bordered by agricultural land uses immediately to the north and east. Adjacent development includes the Beringer Winery warehouse building and wastewater treatment facilities. Therefore, the visual character of the project area is comprised of both residential scale single-family residences (south and west) and agricultural uses including processing and storage (north, east, and west) building and facilities.*

*The subject site is currently developed with two dormitory buildings ranging from one to two stories in height. The one-story building will be demolished and the two story building is to be retained. The expansion of the Vineyard Lodge House is generally consistent with what is presently on the site and would not substantially alter the existing relationship of the site to its surroundings or otherwise make the site incompatible with the surroundings. The new construction would be clustered on the site and exhibit defined boundaries and*

*generous vegetative screening. As such, compatibility of the site with its surroundings is found to be maintained.*

3. Relationship of the design to the site;

*As stated above, the site configuration will include a series of four buildings (3 new) clustered around a central courtyard and traversed by a one-way access road. Those buildings with frontage on Pratt Avenue will feature a stepped design and a minimum setback of 20 feet from Pratt Avenue so as to limit visual prominence and provide continuity with other properties proximate to the site, which are developed with similar setbacks. Therefore, given the site constraints, the relationship of the design to the site appears to strike an appropriate balance between function and aesthetics.*

4. Determination that the design is compatible in areas considered by the board as having a unified design or historical character;

*The segments of Pratt Avenue proximate to the subject site do not exhibit a unified or historical character. The surrounding area features residential uses, industrial/agricultural production uses, and vineyards. The proposed design is generally consistent with Vineyard Lodge II and the existing character of the site and would not depart significantly from that existing character. The project is therefore not expected to impact an area having a unified or historical character.*

5. Whether the design promotes harmonious transition in scale and character in areas between different designated land uses;

*The subject buildings with frontage on Pratt Avenue will be stepped in height such that the buildings along Pratt will be two stories in front (with max height of 29'2") with taller (3-story) portions confined to the rear of the site (max height of 40'2"). Similarly, the buildings will feature a minimum 20' setback from the Pratt Avenue Property line (50' from Pratt Centerline) in an effort to reduce the perceived massing and scale and promote a harmonious transition in scale relative to residential buildings proximate to the site and in relation to the agricultural production facilities nearby. Further, this site serves as a transition from the adjacent agricultural production and warehouse use on the Beringer property to the single family and vineyard uses further down Pratt Avenue.*

6. Compatibility with future construction both on and off the site;

*The project design is contemporary in style, but with traditional detailing. The buildings feature a neutral color palette. The proposed design would not introduce an element that was so unique or exceptional as to make it incompatible with future development on and/or off site.*

7. Whether the architectural design of structures and their materials and colors are appropriate to the function of the project;

*The proposed buildings will be contemporary in style, but feature some craftsman-like details including wood columns and brackets. The building will be supported by an exposed, parge coated foundation. Exterior walls would be clad in a combination of painted clapboard siding and stained red cedar siding and*

*punctuated with clad windows. The buildings would feature articulated roof-lines with asphalt shingles. The proposed color palette includes neutral hues like brown, natural wood, and moss green. The proposed color and materials reflect traditional materials and colors that would help the buildings to more readily blend in with their surroundings. The architectural design, material, and colors are responsive to the needs of the site and appropriate to the function of the project and generally compatible with adjacent buildings and uses.*

8. Whether the planning and siting of the various functions and buildings on the site create an internal sense of order and provide a desirable environment for occupants, visitors and the general community;

*The proposed site configuration would feature three buildings clustered around a central courtyard. The site would be traversed by a one-way access road with parking clustered around the outer portions of the site, screened with significant amounts of vegetation. As such, the site configuration is expected to provide for a desirable environment that is both functional and aesthetically pleasing to residents and the general community.*

9. Whether the amount and arrangement of open space and landscaping are appropriate to the design and the function of the structures;

*The project proposes a generous level of landscaping and will retain a number of trees at the property frontage to promote screening. The level of landscaping will soften the look of the new buildings and appears to be appropriate for the use and to promote continuity with surrounding properties.*

10. Whether sufficient ancillary functions are provided to support the main functions of the project and whether they are compatible with the project's design concept;

*The project will include interior students commons and dining area as well as an outdoor courtyard and amenity area. In addition, the project will provide alternative forms of transportation to serve the student population and facilitate ease of travel between the subject site and Greystone Campus as well as other destinations. Given the on-site amenities and provision of alternative transportation, the project is expected to provide sufficient ancillary functions to support the functionality of the student dormitory use and which are of a design that is consistent with the overall aesthetic.*

11. Whether access to the property and circulation systems are safe and convenient for pedestrians, cyclists and vehicles;

*Primary automotive access will from Pratt Avenue and Vineyard Road, both of which were found to provide adequate circulation and access to the project site and have been conditioned to be improved to address project specific impacts. Onsite circulation and access is provided via one-way access road off of Vineyard Road and exiting at Pratt Avenue. This access road is expected to provide convenient vehicular site access. In addition, the project will be subject to Mitigation Measure Trans-2, which amongst other things, requires that the applicant introduce a Class II bike lane along westbound Pratt Avenue (northern side) extending from the project site to the intersection of SR 29 (Main Street)*

*and Pratt Avenue and restripe for a fog line along eastbound Pratt (southern side) extending from the project site to the intersection of SR 29 thereby promoting more safe and convenient connectivity for bicyclists. Accordingly, the project is expected to promote safe and convenient access for all types of transportation.*

12. Whether natural features are appropriately preserved and integrated with the project;

*As a previously developed site, the Vineyard Lodge Housing site does not contain any significant natural features with the exception of some Coast Live Oak Trees. To accommodate the proposed buildings, the project will remove two (2) Coast Live Oaks, which pursuant to Mitigation Measure BIO-1, shall be replaced in-kind and at a ratio of three (3) new 15 gallon trees for every one tree removed. A portion of replacement oaks may be accommodated on the Greystone Campus if site constraints are such that all replacement trees cannot be accommodated within the proposed site plan. As such, the project will integrate natural features to the extent possible and where that is not possible, will mitigate accordingly.*

13. Whether the materials, textures, colors and details of construction are an appropriate expression of its design concept and function and whether they are compatible with the adjacent and neighboring structure and functions;

*Please refer to response No. 7.*

14. In areas considered by the board as having a unified design character or historical character, whether the design is compatible with such character;

*Please refer to response No. 4*

15. Whether the landscape design concept for the site, as shown by the relationship of plant masses, open space, scale, plant forms and foliage textures and colors create a desirable and functional environment and whether the landscape concept depicts an appropriate unity with the various buildings on the site;

*The proposed landscape plan will feature a variety of trees, shrubs, and sod. The majority of existing Camphor trees at property frontage will be maintained. The landscape plan will feature 21 plant types which will be distributed throughout the site and promote continuity and unity throughout the site as well as soften the look of paved parking areas around the periphery of the site and provide shade.*

16. Whether plant material is suitable and adaptable to the site, capable of being properly maintained on the site, and is of a variety which is suitable to the climate of St. Helena;

*With the exception of the sod, all proposed plant materials are considered "low" water use plantings and are expected to be adaptable to the St. Helena climate. Further, all plantings on site are required to comply with the City of St Helena Municipal Water Efficient Landscape Ordinance, which regulates landscaping water use.*

17. Whether sustainability and climate protection are promoted through the use of green building practices such as appropriate site/architectural design, use of green building materials, energy efficient systems and water efficient landscape materials.

*As detailed herein, the project will use efficient fixtures and comply with Title 24 building standards. In addition, most landscaping will be comprised of low water use planting and will comply with the City of St Helena Municipal Water Efficient Landscape Ordinance. Further, the project will limit parking so as to avoid inducing vehicular travel demands and Green House Gas production by promoting use of alternative transportation and ride sharing. As such, the project will promote sustainable practices and climate protection.*

- C. SETBACK VARIANCE. Pursuant to Municipal Code Section 17.172.050, the Planning Commission makes the following variance findings to support the motion to approve a setback variance:

- (a) A hardship peculiar to the property, not created by any act of the owner, exists. In this context, personal, family or financial difficulties, loss of prospective profits, neighboring violations, are not hardships justifying a variance.

*The currently configured parcel was created in 1971 subject to dedication of a 20 foot strip of land along the northwesterly side of Pratt Avenue, creating a 60 foot right of way. As demonstrated in the applicant's setback variance request, neighboring properties were either (1) not required to dedicate land, or (2) were required to dedicate only a 10 foot strip of land. In addition, the property has a unique triangle shape with its widest and most developable portion immediately adjoining the property line subject to the special Pratt Avenue setback requirement. Literal enforcement of the 36 foot setback requirement from the property line—which encroaches 10-20 feet more into the property than does the property line at neighboring properties—would create a hardship peculiar to the property.*

- (b) The Variance is necessary for the preservation and enjoyment of substantial property rights of the applicant which are possessed by other properties in the same district and in the same vicinity; and that a Variance, if granted, would not constitute a special privilege of the recipient not enjoyed by his or her neighbors.

*Granting a variance would not constitute a special privilege for the property relative to neighboring properties. Six neighboring homes on the northwesterly side of Pratt Avenue are situated within the special 36 foot setback, none of which were required to dedicate a 20 foot strip of land like that of the subject property. The proposed development plan will exhibit a greater setback than what currently exists for the Vineyard Lodge 1 building (proposed for demolition). In light of the above, it is found that granting a setback variance is necessary for the preservation and enjoyment of the applicant's substantial property rights that*

*are possessed by nearby properties that are developed in similar proximity to the northwestern boundary of Pratt Avenue.*

- (c) The authorization of the Variance will not be of substantial detriment to adjacent properties, and will not materially impair the purpose and intent of this Chapter or the public interest, nor adversely affect the General Plan.

*Authorization of the Variance will not be of substantial detriment to adjacent properties, nor will it materially impair the public interest, as the new developed portion of the property will be located further from Pratt Avenue than the existing Vineyard Lodge I, proposed for demolition. In addition, large mature trees along a substantial portion of the site frontage and along its other borders will screen the views of the new dormitory development. Recognizing the unique nature of the property and granting a Variance does not impair the purpose and intent of the Code's Variance chapter.*

*The chapter's stated purpose is, in part, to allow for deviation from a strict application of the Code in the event that a property exhibits an unusual shape or other exceptional characteristic, and as a result would be subjected to practical difficulties or undue hardship in their development. Authorization of the Variance is consistent with St. Helena's longstanding efforts to manage growth by encouraging further development of already developed parcels, rather than removal of vineyards within City limits, and would not adversely affect the General Plan. The project's 123-bed expansion to serve a projected enrollment expansion of 100 students will allow students who currently compete for housing with members of the St. Helena workforce to move into student dormitories; freeing up that housing would benefit St. Helena families and employees.*

- (d) The condition or situation of the specific piece of property for which the Variance is sought is not so general or recurrent in nature as to make reasonably practicable the formulation of a general regulation for such condition or situation

*The property has a unique shape and was required to dedicate a larger strip of land relative to other nearby properties subject to the 36 foot special setback. Accordingly, the property's condition is not so general or recurrent in nature to make formulation of a general regulation addressing the issue reasonably practicable.*

- (e) The Variance and any buildings or structures permitted by the Variance will not be detrimental to the public health, safety and welfare of the community.

*Neither the Variance nor structures permitted by it will be detrimental to community public health, safety, and welfare. Granting the Variance will allow development of new student dormitories further removed from Pratt Avenue than the existing Vineyard Lodge I building. The applicant has designed the dormitory buildings to be partially screened by large, mature trees located along the site's*

*borders. Reducing parking spaces on the site and restricting supply of parking permits for student dormitory residents will remove vehicles from the City's streets, particularly St. Helena Highway. Student residents will have ample transportation alternatives: the frequent shuttle service between the property and the Greystone Campus, free access to on-site bicycles and the new bicycle lane provided by the Culinary Institute of America along Pratt Avenue, and the St. Helena shuttle and VINE transportation. The parking Variance further discourages private automobile trips by Culinary Institute of America students in and around St. Helena, and therefore confers a benefit to the community.*

D. PARKING VARIANCE. Pursuant to Municipal Code Section 17.172.050, the Planning Commission makes the following variance findings to support the motion to approve a parking variance:

- (a) A hardship peculiar to the property, not created by any act of the owner, exists. In this context, personal, family or financial difficulties, loss of prospective profits, neighboring violations, are not hardships justifying a variance.

*Imposition of the Code's parking requirement for a "rooming, boarding, or lodging house" or "hotel" in the student dormitory context would create a hardship peculiar to the property. Rooming, boarding, or lodging houses traditionally serve individuals unaffiliated with a college or university, who in a community such as St. Helena likely would require use of an automobile for daily activities. Similarly, hotels in St. Helena traditionally serve visitors exploring the region's amenities by private automobile. Requiring one parking space for each guestroom in those contexts is justifiable given the expected patterns of vehicle use, and the potential that failure to provide ample parking spaces could negatively affect neighboring properties. The Culinary Institute of America's students, on the other hand, are offered shuttle service for their daily trips to and from the Greystone Campus, do not require a car for the vast majority of their daily school-related activities, and are offered on-demand car rental for personal trips as well as access to free bicycles on site. Imposition of a one space per dormitory room requirement would create a hardship by dramatically changing the project as proposed and would require elimination of an open quad gathering area and potential reduction in number of student beds in favor of a hardscape parking lot.*

- (b) The Variance is necessary for the preservation and enjoyment of substantial property rights of the applicant which are possessed by other properties in the same district and in the same vicinity; and that a Variance, if granted, would not constitute a special privilege of the recipient not enjoyed by his or her neighbors.

*The Variance would not constitute a special privilege for the property relative to neighboring properties, none of which are developed with student dormitories that require limited on-site parking. Given the unique and limited travel patterns of student residents of the dormitory, with the Variance both the property and*



*neighboring properties will be subject to minimum parking requirements tailored to actual expected travel patterns and parking space demand, and neither the property nor neighboring properties will be required to provide unnecessary parking spaces reducing enjoyment of substantial property rights.*

- (c) The authorization of the Variance will not be of substantial detriment to adjacent properties, and will not materially impair the purpose and intent of this Chapter or the public interest, nor adversely affect the General Plan.

*Authorization of the Variance will not be of substantial detriment to adjacent properties, nor will it materially impair the public interest. The Culinary Institute of America will provide shuttle and on-demand car rental service, will impose a highly restrictive permit system both at the property and the Greystone Campus discouraging students without assigned parking from bringing cars to St. Helena, will provide free bicycles for use by students, and is amenable to restrictions on parking in the surrounding area to benefit nearby residents by discouraging student parking off the property. The Variance serves the public interest by effectively removing vehicles from City streets, particularly St. Helena Highway, encouraging environmentally-friendly and efficient transportation to and from the Greystone Campus. The parking Variance does not impair the purpose and intent of the Code's Variance chapter. The chapter's stated purpose is, in part, to allow variation from strict application of the Code where extraordinary situations or conditions mean that literal enforcement would involve practical difficulties or would cause undue hardship. Here, requiring unnecessary parking spaces would work against the public interest and cause undue hardship to the property and the school. Authorization of the Variance is consistent with City and regional policies encouraging use of alternate modes of travel, both to reduce harm to the environment and to take traffic off local roads, and would not adversely affect the General Plan. These policies and goals are consistent with the project's shuttle service and free bicycle program that reduce the need for parking and provides further support for the parking Variance.*

- (d) The condition or situation of the specific piece of property for which the Variance is sought is not so general or recurrent in nature as to make reasonably practicable the formulation of a general regulation for such condition or situation

*Formulation of a general regulation is not reasonably practicable given the lack of other student dormitories in the City, the targeted transportation options provided to the Culinary Institute of America's students, and consistency with parking reduction practices at other California campuses as discussed in the Crane Transportation Memo that justify the Variance.*

- (e) The Variance and any buildings or structures permitted by the Variance will not be detrimental to the public health, safety and welfare of the community.

*Neither the Variance nor structures permitted by it will be detrimental to community public health, safety, and welfare. Granting the Variance will allow development of new student dormitories further removed from Pratt Avenue than the existing Vineyard Lodge I building. The applicant has designed the dormitory buildings to be partially screened by large, mature trees located along the site's borders. Reducing parking spaces on the site and restricting supply of parking permits for student dormitory residents will remove vehicles from the City's streets, particularly St. Helena Highway. Student residents will have ample transportation alternatives: the frequent shuttle service between the property and the Greystone Campus, free access to on-site bicycles and the new bicycle lane provided by the Culinary Institute of America along Pratt Avenue, and the St. Helena shuttle and VINE transportation. The parking Variance further discourages private automobile trips by Culinary Institute of America students in and around St. Helena, and therefore confers a benefit to the community.*

- E. Pursuant to Municipal Code Section 17.124.030 (H), the Planning Commission further finds that the Vineyard Lodge Housing Site constitutes an "unlisted use" and determines that based on the particularities of the proposed project, including the dormitory-use, established shuttle program, and provision of on-demand rental cars and bicycles, the provision of 69 designated parking spaces is sufficient to serve the project site.
- F. USE PERMIT. Pursuant to Municipal Code Section 17.168.050, the Planning Commission finds that The Vineyard Lodge dormitories are appurtenant to the CIA at Greystone and provide affordable and convenient lodging for students enrolled in a culinary program. As conditioned, it is expected that the project would operate in an acceptable manner and therefore, the Planning Commission makes the following Use Permit findings to support the motion to approve the use permit:
1. That the proposed use would not generate odors, fumes, dust, light, glare, radiation or refuse that would be injurious to surrounding uses or to the community.

*The site operation is expected to be substantially similar to that currently existing. There is no expectation that the expansion of the student housing would generate odors, fumes, dust, light, glare, radiation or refuse that would be injurious to surrounding uses or to the community.*

2. That the proposed use would not generate levels of noise that adversely affect the health, safety, or welfare of neighboring properties or uses.

*At project operation, the on-site land use at the Vineyard Lodge Housing Site and associated noise environment will continue to be typical of a multi-unit development (dormitories) and subject to the City's noise exposure standards. The expansion of the Vineyard Lodge Housing site is not expected to introduce a substantial permanent increase in the ambient noise environment due to activities on-site or as a result of stationary or mobile sources. The noise*

*generating elements of the proposed project such as outdoor conversations, mechanical equipment, the operation of landscaping equipment, car engines and car doors would be similar to the existing noise environment present on-site and in the vicinity. The project is expected to introduce noise elements at levels that are generally consistent with the ambient noise conditions.*

3. That the proposed use would not generate traffic noise in excess of the "normally acceptable" range identified in the General Plan.

*As detailed in the Noise Impact Study (Appendix L of the IS/MND), the project is expected to add less than 8 trips to Pratt Avenue during the a.m. and p.m. peak hours. This would constitute a negligible increase in traffic noise of less than 0.5 dB which falls well below the threshold of a perceptible change of 3 dB. As such implementation of the proposed project will not substantially increase traffic noise in the area.*

4. That the proposed use would not make excessive demands on the provision of public services including water supply, sewer capacity, energy supply, communication facilities, police protection, and fire protection.

*The Project will not result in substantial adverse impacts associated with any public facilities or services. The project site is located adjacent to the urban limit line and is well served by existing public utilities and services. The project will not generate a substantial increase in demands that warrant the expansion or construction of new public facilities. The project site is also located proximate to the police and fire stations. Additional fire service and police calls may occur as a result of the project. However, the project will be subject to the payment of development impact fees, including the Public Safety Impact Fee which funds equipment and facilities' costs for Police and the Fire Departments that may go towards vehicles, capital equipment, and building improvements so as to maintain a high level of public safety. Accordingly, the project will not place excessive demands on any public services.*

5. That the proposed use would provide adequate ingress and egress to and from the proposed location.

*The project's internal circulation plan has been reviewed and meets all requirements of the St. Helena Public Works & Utilities and Fire Departments. Site circulation was determined to be adequate, including sufficient street widths to allow for fire truck turn around and sufficient access to residential buildings. Therefore, ingress and egress is considered adequate.*

6. That allowing the proposed use would not conflict with the City's goal of maintaining the economic viability of a local serving economy.

*The proposed student housing is appurtenant to the Culinary Institute of America Greystone Campus. The housing would not displace local serving uses nor impair the City's viability of maintaining a local serving economy.*

7. That the proposed use would be compatible with surrounding land uses and would not conflict with the purpose established for the district within which it would be located.

*The Vineyard Lodge site exhibits a land use and zoning designation of PQP: Public-Quasi-Public. The PQP zoning designation does not prescribe specific development standards, but rather stipulates that all projects within the PQP zoning district be subject to a conditional use permit and that development standards shall be established through the use permit review process. These regulations help guarantee that incompatible development and/or activities can be avoided by requiring such projects be held to a high level of scrutiny and are vetted through the public review process, CEQA review, and would be conditioned accordingly. Given that the proposed use serves an infill and expansion of an existing use there is no expectation that the proposed project would introduce an element that would conflict with the intent of the PQP zoning designation.*

8. That the proposed use would not be in conflict with the City's General Plan.  
*As detailed, herein the project would comply with applicable General Plan policies.*

9. That the proposed use would not be injurious to public health, safety, or welfare.  
*The proposed project consists of infill student housing that would operate in a manner substantially similar to the existing Vineyard Lodge Housing. As such, the project would not be injurious to health, safety, or welfare.*

10. That granting the use permit would not set a precedent for the approval of similar uses whose incremental effect would be detrimental to the City or would be in conflict with the General Plan.

*Use permits are considered on a case by case basis and based on the specific merits of a given project. Accordingly, the granting of this use permit would not influence future decisions or otherwise set a precedent.*

11. That, as demonstrated on a detailed plan submitted by the applicant, adequate off-street parking to accommodate the long term parking needs of employees and business owners and customers is available.

*The applicant proposes to provide a level of parking commensurate with the demand exhibited by the current residents of Vineyard Lodge Housing Site. At present, 31 percent of residents hold parking permits. It is reasonably expected that this level of demand would continue with implementation of the proposed*

*project which would translate to 69 designated spaces for the total proposed resident population of 224 students. .*

*There is no reason to believe that the student to vehicle ratio would substantially change under the proposed project, namely because (1) the CIA retains authority to issue or not issue parking permits, (2) the project will be subject to a condition of approval stipulating that it may not issue more than 69 parking permits, and (3) the site is uniquely operated in that it provides frequent reliable transportation to and from the Greystone Campus and to other locations, as needed, will provide three on-demand rental cars, and per mitigation measure LU-1, will be required to introduce a scalable bike share program that may be expanded as demand necessitates. As such, the project is expected to be able to accommodate long term parking needs for residents of the site.*

12. That the capacity of surrounding streets is adequate to serve the automobile and delivery truck traffic generated by the proposed use.

*As detailed in the Traffic Impact Report (Appendix Q of the IS/MND), the project's trip generation is minimal (approximately 4 trips during am and pm peak hours) and therefore the capacity of streets is presumed to be adequate.*

- G. The Planning Commission approves the demolition permit, design review, variances, and use permit for the above-described project with the following conditions of approval. The project shall be in conformance with all city ordinances, rules, regulations and policies in effect at the time of issuance of a building permit. The conditions noted below are particularly pertinent to this permit and shall not be construed to permit violation of other laws and policies not so listed.

#### **Conditions of Approval**

1. Project approvals shall be vested within one (1) year from the date of final action. A building permit for the use allowed under this approval shall have been obtained within one (1) year from the effective date of this action or the approval shall expire, provided however that the approval may be extended for up to two (2) one-year periods pursuant to the St. Helena Municipal Code, Section 17.08.130, Extension of Permits and Approvals. Any request for an extension of this approval shall be justified in writing and received by the Planning Department at least thirty (30) days prior to expiration.
2. The approvals shall not become effective until fourteen (14) calendar days after approval, providing that the action is not appealed by the City Council or any other interested party within that 14-day period.
3. All required fees, including planning fees, development impact fees, residential in-lieu housing fees, building fees, toilet retrofit fees, and St. Helena Unified School District fees shall be paid prior to issuance of a building permit. Fees shall be those in effect at the time of the issuance of the building permit.

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4. Upon approval of Resolution XX-XX, the Applicant shall provide the Planning Department with the Notice of Determination Fee required by Fish and Wildlife Code Section 711.4(d). The fee payment shall be made by check payable to the Napa County Clerk and in the amount required and published by the Napa County Clerk for such fee.
5. All Mitigation Measures enumerated in the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program are incorporated by reference and made conditions of approval.
6. Prior to issuance of any construction permits, these conditions of approval and the Mitigation and Monitoring and Reporting Program shall be included with the plan set. A copy of the approved plans shall be maintained on site when construction activities are underway.
7. Minor modifications to approved plans may be approved by the Planning Director insofar as they are in substantial conformance with this approval.
8. Pursuant to St. Helena Municipal Code Section 17.08.110, this permit shall run with the land and shall be binding upon all parties having any right, title or interest in the real property or any part thereof, their heirs, successors and assigns, and shall inure to their benefit and benefit of the City of St. Helena.
9. The primary purpose of this review is for compliance with the General Plan and Zoning Ordinance. The property owners or their designee shall be responsible for meeting with the Building Official, Fire Inspector and or Public Works Department to review compliance with Building Codes, Fire Codes and specific Public Works Standards including fire protection systems and any applicable accessibility standards of Title 24.
10. Construction shall be in compliance with plans submitted and reviewed by the Planning Commission on February 21, 2017, except as modified herein.
11. The site shall be kept clear at all times of garbage and debris. No outdoor storage is permitted.
12. A final lighting plan delineating building mounted lights shall be reviewed and approved by the Planning and Community Improvement Director prior to building permit issuance.
13. Trash bins shall not be visible from public right-of-way. The trash enclosure(s) will be constructed of opaque materials and be of sufficient size to permit the storage, removal and replacement of standard commercial size trash bins. No collection, storage or stacking of garbage, trash and refuse is permitted outside the trash enclosure.
14. All plantings shall be maintained in good growing condition. Such maintenance shall include, where appropriate, pruning, mowing, weeding, and cleaning of debris and trash, fertilizing and regular watering. Where necessary, plantings shall be replaced with other plant materials to insure continued compliance with applicable landscaping requirements, Irrigation systems shall be maintained in sound operating condition with heads periodically cleaned and replaced when missing to

ensure efficient watering and to maintain good health and vitality of landscape materials.

15. No signage is approved by this permit. A separate sign permit in compliance with the Municipal Zoning Code shall be obtained prior to installation of signage.
16. Property owners shall recognize that there exists a right to farm properties within the district and in the vicinity of the district. There is a good faith expectation that no complaints will occur regarding legal, normal agricultural activities on properties in the district or in the vicinity of the district. Such activities may include day or night disbursement of chemicals, and creation of dust, noise, or fumes.
17. In any action or proceeding to attack, challenge, invalidate, set aside, void or annul the City's approval of applicant's Project, in whole or in part, applicant shall defend, at its own expense and without any cost to the City, and with counsel acceptable to the City, and shall fully and completely indemnify and hold the City, its agents, officers, and employees harmless from and against any and all claims, causes of action, damages, costs, attorney's fees and liability of any kind, so long as the City reasonably promptly notifies the applicant of any such claim, action, or proceedings and the City cooperates fully in the defense of the action or proceedings.

#### **Planning Department Conditions**

18. As applicable, the permittee shall comply with any and all previous conditions of approval for the Vineyard Lodge Housing Site except as they may be explicitly modified by this action. To the extent there is a conflict between previous conditions of approval enumerated in Resolution No. 2004-33 or 2008-75 and these conditions of approval, these conditions shall supersede the previous permit and associated conditions.
19. Rental and/or occupancy of Vineyard Lodge dormitories shall be limited only to students who are actively enrolled at the Culinary Institute of America at Greystone in an Associate, Bachelor's, Master's and/or other Certificate Degree Programs with the exception that an on-site manager(s) shall reside on site consistent with State Housing Law, Title 25. The student's length of stay shall be commensurate with the respective degree program.
20. The Applicant shall provide a detailed Transportation Plan that describes the operation of (1) the shuttle service (2) the rental car service (3) parking permits for individual vehicles and (4) the specifics of the on-demand bike program as they relate to the Greystone Campus and Vineyard Lodge Housing Site. The Plan shall be subject to review and approval by the Planning and Community Improvement Director. A copy of the approved shall be provided and kept in the hard copy and digital project file and made available to the public as requested.
21. Parking Permits issued to students who are actively enrolled at the Culinary Institute of America at Greystone for the Vineyard Lodge Housing Site shall not exceed 69 permits at any one time.

22. No off-street parking is allowed on the Southside of Pratt Avenue, east of the Railroad Tracks.
23. The applicant shall obtain all required approvals in writing for communal kitchen facilities from the Napa County Department of Environmental Management. A copy of the approval shall be provided to the City and added to the project file.
24. Prior to issuance of building permit, the applicant shall enter into a Joint Water Use Agreement with the City and applicable to 830 Pratt Avenue and 2555 Main Street. The Joint Agreement shall authorize a maximum water allocation of 23.1 acre feet/year to be utilized by the two sites. The Joint Agreement shall include enforcement provisions and penalties if the allowance is exceeded in a given year. Said agreement is subject to the approval of the St Helena City Council.
25. Any significant change(s) to the operation of the approved use, including a substantial change in the operational characteristics of the site, intensity, or type(s) of uses shall require amendment to this use permit.

#### **Public Works Department Conditions**

26. Approval of this project shall be subject to the requirements of, and all improvements shall be designed and constructed in accordance with, the most current version at the time of improvement plan submittal, Caltrans Standards and Specifications, the City of St. Helena Municipal Code, the St. Helena Water and Sewer Standards, the St. Helena Street, Storm Drain and Sidewalk Standards, and all current federal, state and county codes governing such improvements.
27. For any improvements outside the existing building envelope, a grading and drainage plan showing topographic data, all easements, infrastructure onsite and directly adjoining, and an erosion control plan shall be submitted for review and approval by the City Engineer prior to the issuance of a building permit. If the project entails more than 50 cubic yards of soil disturbance, 10,000 square feet of disturbance area, a cut or fill of 3 feet or more, or alteration of any drainage pattern, a grading permit shall be required.
28. Drainage needs to be routed to prevent inundation of neighboring properties. Grading and/or site improvement plans shall show how 2-year and 10-year storm flows shall be infiltrated on site and/or diverted at the property lines to prevent inundation of neighboring properties. The applicant shall submit a drainage and hydrology analysis for the project impact, including downstream erosion potential, to the City of St. Helena Public Works Department with the Improvement Plan submittal in accordance with City of St. Helena, Napa County and State of California codes in effect at the time of improvement plan submittal.
29. Erosion and sediment control plans shall conform to the latest State and City codes at a minimum

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30. The applicant shall adhere to the latest Water Agreement with the City and shall incorporate water conservation practices into the proposed project per the Water Availability Analysis prepared by Summit Engineering, dated September 2, 2016. Any and all non-conforming appliances and plumbing fixtures shall be removed from the premises. The water conservation requirements shall be replicated in full on the architectural plans.
31. A detailed Post-Construction Stormwater Control Plan (SWCP) that identifies and sizes all permanent post-construction stormwater treatment BMPs shall be prepared and submitted for review approval. The Plan shall be prepared in accordance with the latest edition of the *Bay Area Stormwater Management Agencies Association (BASMAA) Post-Construction Manual* and the requirements of the State Water Resources Control Board Phase II Municipal Separate Storm Water System (MS4) General Permit (Order 2013-0001 DWQ).
32. A Post Construction Stormwater Operations and Maintenance Plan that provides a color-coded plan sheet showing all storm drain and water quality infrastructure that is to be maintained, along with detailed instructions and schedules for the ongoing maintenance and operation of all post-construction stormwater BMPs shall be submitted for review and approval by the City Engineer. Once approved, the property owner shall enter into an agreement with the City that provides the terms, conditions, and security associated with the ongoing requirements of the Post Construction Stormwater Best Management Practices.
33. Prior to Certificate of Occupancy, the Applicant shall enter into and record a Post-Construction Stormwater Operations and Maintenance Agreement with the City.
34. If the project includes 500 square feet or more of new landscaping and/or 2,500 square feet or more of rehabilitated landscape, the proposed landscaping shall comply with the State's Model Water Efficient Landscape Ordinance (MWELO).
35. A detailed Soils Investigation/Geotechnical Report shall be prepared and submitted for review. The report shall address, at a minimum, potential for liquefaction, R-values, expansive soils and seismic risk. The improvement plans shall incorporate all design and construction criteria recommended in the Geotechnical Report.
36. Unless otherwise explicitly permitted, all existing wells, septic tanks/systems and/or underground fuel storage tanks shall be abandoned under permit and inspection of Napa County Department of Environmental Services or other

designated agency. If there are none, the project engineer shall provide a letter describing the scope of the search done to make this determination.

37. Site plan shall show the location of any trees within the project area. Provide a tree protection plan for approval by the Public Works Director prior to approval of the building permit. The plan shall be coordinated with any civil grading/drainage/improvement plans.
38. The Applicant shall keep adjoining public streets free and clean of project dirt, mud, materials, and debris during the construction period, as is found necessary by the City Engineer.
39. The developer shall underground all on-site utility lines per St. Helena Municipal Code. The cost of undergrounding shall be the responsibility of applicant.
40. Due to the economic and engineering infeasibility of undergrounding regional serving overhead power lines, such existing lines may remain on overhead power poles.
41. Provide details of any and all proposed fencing, gates and/or walls on all plans submitted for building permit review.
42. Any new and modified existing water laterals, meters and backflow prevention devices shall be required and constructed in accordance with the current requirements of the City of St. Helena's Water Standards and the California Department of Health Standards. Existing meter boxes located within a driveway shall be retrofitted with a traffic-rated box. New laterals shall be located perpendicular to the water main and outside any driveway/drive aisle.
43. Remodels or new construction which requires fire sprinklers shall install an appropriately-sized water service with appropriate backflow and meter devices prior to Certificate of Occupancy. Fire system calculations shall be submitted with the Grading and Drainage Plan to verify fire service lateral and meter sizing. Deferred submittals are not accepted.
44. No construction shall commence until adequate access to fire water supply is available to building sites, and the Fire Chief shall ensure adequate access to fire water supply prior to issuance of building permits.
45. In order to confirm the theoretical assumptions in the provided sewer capacity study, the applicant is required to perform 7-day flow monitoring at the downstream sanitary sewer manholes (No. 6-5 and No. 6-18) to verify that the existing sewer pipe has adequate capacity to accommodate the proposed additional flows prior to building permit approval. Peak sewer flows will not be allowed to exceed 2/3 full pipe. If insufficient capacity is available at the site and

with the current infrastructure, a new sanitary sewer must be constructed with adequate capacity by the owner as a condition of the site development.

46. Construct frontage improvements in accordance with the *Frontage Improvement Plan* prepared by Summit Engineering, dated December 7, 2016. Said improvements shall include a full with grind and overlay of 0.10 feet and a cross section consisting of a minimum of 8' parallel parking, 5' bike lane, and 12' lanes (east and west).
47. Trash areas, dumpsters and recycling containers shall be enclosed and roofed per State and County standards to prevent water run-on to the trash area and water runoff from the area, to contain litter and trash so that it is not dispersed by the wind or run-off during waste removal. In the event that wine or food is disposed in these areas, the enclosed trash area shall drain to the sanitary sewer system. An area drain connected to the sanitary sewer shall be installed in the enclosure area and a structural control such as an oil/water separator or sand filter shall be included. No other area shall drain into the trash enclosure. A sign shall be posted prohibiting the dumping of hazardous materials into the sanitary sewer.
48. The applicant shall repair all public improvements that are damaged by the construction process in accordance with the City Water/Sewer/Street/Storm Drain/Sidewalk Standards prior to Certificate of Occupancy.
49. Existing streets being cut by new utility services will require edge grinding and an A.C. overlay per City standards, extent to be determined by the Public Works Department.
50. The applicant shall be required to obtain an encroachment permit for improvements on public right-of-ways prior to receiving a grading or building permit authorizing site work or construction activities on the site.

#### **Building Department Conditions**

51. A building permit is required for all onsite demolition, construction and/or change of occupancy.
52. The applicant will be required to comply with the codes adopted at the time the applicant applies for a building permit. At this time the City of St. Helena utilizes the 2013 Title 24 codes.
53. When submitting plans for a building permit, the plans shall include all documentation listed on the building permit application checklist.
54. The applicant shall provide a construction waste management plan with the building permit application.

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55. The plans for construction shall include a checklist for compliance with the California Green Buildings Standards Code, mandatory measures. Provide a reference on the checklist indicating where the mandatory measures can be found on the plans.
56. When submitting plans, the title page shall include all information referenced on the building permit application checklist Title Page requirements.
57. Building Permit application materials and plans shall include any documentation pertaining to special loads applicable to the design and the specified section of the code that addresses the condition; special inspections for any systems or components requiring special inspection; requirements for seismic resistance; and a complete list of deferred submittals at time of application. Any deferral of the required submittal items shall have prior approval of the Building Official however deferral of fire sprinkler design is not allowed.

**Fire Department Conditions**

58. Fire sprinklers and fire hydrants shall be installed as required by the Fire Department.

I HEREBY CERTIFY that the foregoing demolition permit, design review, and use permit for 2555 Main Street, and the foregoing demolition permit, design review, variances, and use permit for 830 Pratt Avenue were duly and regularly approved by the Planning Commission of the City of St. Helena at a regular meeting of said Planning Commission held on February 21, 2017 by the following roll call vote:

**AYES:**

**NOES:**

**ABSENT:**

**ABSTAIN:**

APPROVED:

ATTEST:

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Grace Kistner  
Chair, Planning Commission

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Noah Housh  
Planning Director

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Attachment 2

**CITY OF ST. HELENA****RESOLUTION NO. 2004-33****APPROVING A USE PERMIT TO CONVERT THE MARLINDA SKILLED NURSING HOME TO A DORMITORY FOR STUDENTS ENROLLED AT THE CULINARY INSTITUTE OF AMERICA GREYSTONE CAMPUS.**

PROPERTY OWNER: Eugene and Marthann Demchuk APN: 009-<sup>010</sup>~~001~~-024

**Recitals**

1. The Culinary Institute of America (CIA) requested approval of a Use Permit to convert the Marlinda Skilled Nursing Facility to use as a dormitory for students enrolled at the CIA Greystone campus. The request was made pursuant to Section 17.140.020 D, which allows a non-conforming use to be changed to another nonconforming use of lesser intensity. The property is zoned A-20: Twenty Acre Agriculture and a skilled nursing facility is neither a permitted nor conditional use in the zoning district.

The Marlinda Skilled Nursing Facility is 15,862 square feet, including a storage/laundry building to the rear of the property. The main building has bedrooms, kitchen, offices, physical therapy rooms and a beauty salon. The facility is located on a 2.61 acre property and has City water and City sewer services.

Marlinda has been licensed for an occupancy of 70 residents in the past, but has been operating with a permit for 61 residents in recent years. The CIA proposes to use the facility for 40 students and one resident manager. The interior of the main structure will be remodeled to have 40 bedrooms, each with a private bath. There will be also be a lounge / dining area and kitchen. The exterior of the structure will not be modified except to repair existing conditions. The storage/laundry building will remain in that use. The students will attend courses at the CIA Greystone campus for periods of time ranging from three to five days. The school will operate a shuttle bus to take students between the dormitories and the Greystone building.

The CIA would also like to utilize the property for overflow parking from special events. The CIA has previously utilized Beringer Vineyards, Charles Krug, Markham Winery, Freemark Abbey, St. Clement, and Marlinda for overflow parking.

2. The Planning Commission of the City of St. Helena, State of California, held a noticed public hearing on February 17, 2004 and approved the use permit.

3. The Planning Commission action was appealed to the City Council by Joice Beatty. The appeal was filed within the 14 day appeal period.

4. The City Council of the City of St. Helena, State of California, held a noticed public hearing on March 23, 2004.

Resolution

The City Council of the City of St. Helena, State of California, approved the Use Permit on the following basis:

A. The City Council hereby finds that this project is exempt from the California Environmental Quality Act pursuant to Section 15301, Class 1 of the CEQA Guidelines pertaining to existing facilities. Class 1 consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment or topographical features involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination.

B. The City Council makes the following Use Permit findings, Section 17.168.050, to support the motion to approve the Use Permit:

1. That the proposed use would not generate odors, fumes, dust, light, glare, radiation or refuse that would be injurious to surrounding uses or to the community.
2. That the proposed use would not generate levels of noise that adversely affect the health, safety, or welfare of neighboring properties or uses.
3. That the proposed use would not generate traffic noise in excess of the "normally acceptable" range identified in the General Plan.
4. That the proposed use would not make excessive demands on the provision of public services including water supply, sewer capacity, energy supply, communication facilities, police protection, and fire protection.
5. That the proposed use would provide adequate ingress and egress to and from the proposed location.
6. That allowing the proposed use would not conflict with the City's goal of maintaining the economic viability of a local serving economy.
7. That the proposed use would be compatible with surrounding land uses and would not conflict with the purpose established for the district within which it would be located.
8. That the proposed use would not be in conflict with the City's General Plan.
9. That the proposed use would not be injurious to public health, safety, or welfare.
10. That granting the use permit would not set a precedent for the approval of similar uses whose incremental effect would be detrimental to the City or would be in conflict with the General Plan.
11. That, as demonstrated on a detailed plan submitted by the applicant, adequate off-street parking to accommodate the long term parking needs of employees and business owners and customers is available.
12. That the capacity of surrounding streets is adequate to serve the automobile and delivery truck traffic generated by the proposed use.

C. The City Council makes the following additional findings, pursuant to Chapter 17.168. to allow the conversion of a non-conforming use to another non-conforming use of lesser intensity:

1. The proposed nonconforming use is of lesser intensity than the previous nonconforming use (e.g., fewer employees, reduced storage capacity, reduced demand on public facilities, reduced traffic impacts, less energy consumption or fewer hours of operation);

The City Council utilized the following information for the approval of this finding:

Marlinda operates with 45 full time employees over three shifts per day plus other part-time employees. The CIA dormitory use would have one resident manager plus part time housekeeping and gardening services.

Storage capacity would be reduced on site because interior rooms are being rearranged to be bedrooms.

Water and sewer use is projected to decrease with the dormitory use. The following chart shows the water use for Marlinda for the years 2001, 2002, and 2003.

| Year             | 2001              | 2002              | 2003              | 3 year average    |
|------------------|-------------------|-------------------|-------------------|-------------------|
| Avg. use per day | 6,657 gpd         | 6,545 gpd         | 5,597 gpd         | 6,266 gpd         |
| Avg. 2 month use | 399,432 gallons   | 392,700 gallons   | 335,852 gallons   | 375,994 gallons   |
| Yearly use       | 2,396,592 gallons | 2,357,696 gallons | 2,015,112 gallons | 2,256,466 gallons |

A water use agreement will limit the water use of the dormitory to 1,150,000 gallons of water per year. This is approximately 50% of the historical use.

The decrease in sewage generation should also be proportionately decreased with the conversion to dormitories. The Marlinda sewage system is unusual in that there are three on-site septic tanks, but no leach field. Instead, there are grinders in two of the tanks to break down the solids. These two tanks are then pumped into the larger third tank. The liquids from the third tank are pumped to the City's Crinella Street Pump station, which then pumps to a gravity flow sewer main.

There will be a substantial reduction in traffic trips due to the reduction in employees on-site.

The lighter occupancy load, fewer hours of occupancy, and fewer employees should result in less energy consumption.

The skilled nursing facility operates 24 hours per day, 365 days per week. The dormitory will primarily be occupied during weeknight evenings when classes are over for the day.

2. The proposed nonconforming use will not be detrimental to any existing or potential permitted use in the area in which the nonconforming use is located. These findings shall be in addition to those required for the approval of use permits contained in Chapter 17.168. If a nonconforming use is replaced by a use of lesser intensity, the occupancy thereafter may not revert to a use of greater intensity. In granting a use permit to allow a nonconforming use to be replaced with another nonconforming use of lesser intensity, the planning commission shall establish an amortization schedule for the nonconforming use, by setting a date after which the nonconforming use must be discontinued or replaced with a conforming use.

Existing and potential uses in the surrounding agricultural and residential districts will not be harmed by the change in non-conforming use.

The amortization period for the dormitory use shall coincide with the time period allowed by the Income Tax Code for amortization of the buildings and improvements. That time period allows a thirty-nine and one half year depreciation schedule.

D. The Use Permit for the above described use is granted subject to compliance with the following conditions. Permit shall be in conformance with all City ordinances, rules, regulations and policies in effect at the time of issuance of a building permit. The conditions noted below are particularly pertinent to this permit and shall not be construed to permit violation of other laws and policies not so listed.

1. The Use Permit shall be vested within one (1) year from the date of approval. A building permit for the use allowed under this Use Permit shall have been obtained within one (1) year from the effective date of the Use Permit or the Use Permit shall expire; provided however that the Use Permit may be extended for up to two (2) one-year periods pursuant to the St. Helena Municipal Code, Section 17.08.130, Extension of Permits and Approvals.
2. This permit is valid for this use only. New permits must be applied for upon any change in use. These permits will expire if the use is discontinued pursuant to then existing ordinances and regulations.
3. Any request for an extension of the Use Permit must be justified in writing and received by the Planning Department at least thirty (30) days prior to expiration.
4. All required fees, including planning fees, development fees, building fees toilet retrofit fees, and St. Helena Unified School District fees shall be paid prior to issuance of building permit. Fees shall be those in effect at the time of the issuance of the building permit. All required fees, including planning fees, development impact fees, building fees, toilet retrofit fees, and St. Helena Unified School District fees shall be paid prior to issuance of building permit. Pursuant to City Council Resolution 2003-65, the owner and applicant are informed of the following:

*In recognition of the need for additional affordable housing, and to mitigate the effects of this development on the supply and demand of affordable housing, the permittee shall be subject to a Housing Impact Fee, an inclusionary requirement, an in-lieu fee, and/or similar fair and appropriate mechanisms, to provide funds for or to develop additional affordable housing, should such mechanisms be established by the City.*

5. Compliance with all permit conditions shall occur in accordance with specific regulations but in all cases no later than prior to occupancy or initiation of use unless another time is set by law or by this approval. Occupancy or final inspection of a project may be withheld if all conditions, including payment of fees for services rendered by the City, are not met.
6. The applicant will defend and indemnify and hold the City, its agents, officers, and employees harmless of any claim, action or proceedings to attack, set aside, void or annul an approval so long as the City promptly notifies the applicant of any such claim, action, or proceedings and the City cooperates fully in the defense of the action or proceedings.



7. Provided they are in general compliance with the Use Permit, minor modification may be approved by the Planning Director.
8. This Use Permit shall run with the land and shall be binding upon all parties having any right, title or interest in the real property or any part thereof, their heirs, successors and assigns, and shall inure to their benefit and benefit of the City of St. Helena.
9. The primary purpose of this review is for compliance with the General Plan and Zoning Ordinance. The owner/applicant is responsible for meeting with the Building Official / Fire Inspector to review compliance with Building and Fire Codes, including fire protection systems and the accessibility standards of Title 24.
10. This permit allows the continuation of a legal non-conforming use. Pursuant to Municipal Code Section 17.140.020 D. 2., the Planning Commission establishes an amortization schedule of 39.5 years. Therefore, the use shall be discontinued or brought into legal conforming status prior to September, 2043.
11. The use of the Marlinda facility as a dormitory fulfills the 1993 use permit requirement for student accommodations and allows the enrollment of 104 students at the Greystone Campus.
12. Construction shall be consistent with plans marked Exhibits A, B and C, dated 02/03/04 and with the uses as described in this document.
13. The dormitory rooms shall only be rented to students and teachers of the Culinary Institute of America at Greystone. Rental of rooms are subject to payment of the Transient Occupancy Tax (TOT) pursuant to Municipal Code Chapter 3.28.
14. CIA shall operate a shuttle bus between the Greystone campus and the Pratt Avenue dormitories. The minimum service provided by the shuttle bus shall be on weekdays to coincide with class schedules.
15. In compliance with State Housing Law (Title 25), a manager is required to reside upon the premises.
16. The Marlinda parking lot shall only be utilized by staff and students of the Culinary Institute of America.
17. The property owner shall enter into a water use agreement with the City of St. Helena for municipal water use not to exceed 1,150,000 gallons of water per year. The water agreement shall also be structured to encourage other means of water conservation.
18. A Magnetic Flow Meter shall be installed on the pump at the wastewater system to measure the sewerage flows to the Crinella pump station for the purpose of determining the extent of stormwater infiltration.
19. Any future modifications to landscaping shall be submitted to the Planning Director for reviews. Landscape plans shall comply with Ordinance 92-20, Water Efficient Landscape

Standards and Procedures. Plans shall be designed and verified by a landscape professional and shall include drought tolerant landscaping and low water irrigation systems. Landscaping shall not block vision from exits or at street intersections. If the landscape area is 2,500 square feet or greater, a landscape water flow meter shall be installed for verification of the amount of water being used for landscaping.

20. Plant materials shall be purchased from a source that verifies they have been inspected for glassy winged sharpshooter to ensure that they will not contribute to the spread of Pierce's disease to the surrounding vineyards.
21. Plans and specifications for alteration of the existing automatic fire protection system shall be submitted to the Fire Department for review and approval prior to permit issuance.
22. Fire equipment shall be inspected annually by the Fire Department.
23. Exterior lighting shall be directed or shielded to prevent glare onto the public roadway or adjacent properties.
24. The applicant shall provide for the enclosed storage of trash and separated recyclable materials. The design of the trash storage and recycling area shall be reviewed and approved by the Planning Director.
25. A backflow prevention device shall be installed prior to occupancy unless waived by the Public Works Director.
26. No signs, awnings, or facade modifications shall be installed or constructed without approval of a Sign Permit or Design Review.
27. This property is located in an agricultural district. There exists a right-to-farm the adjoining property. There is a good faith expectation that no complaints will occur regarding legal, normal agricultural activities on the adjacent land. Such activities may include day or night disbursement of chemicals, and creation of dust, noise, or fumes.

Approved at a Regular Meeting of the St. Helena City Council on March 23, 2004 by the following vote:

AYES: Councilmembers Potter, Schoch, Savidge, Sklar, Mayor Slavens

NOES: None

ABSENT: None

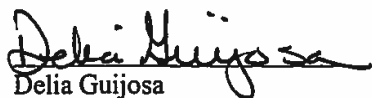
ABSTAIN: None

APPROVED:



Ken Slavens  
Mayor

ATTEST:



Delia Guijosa  
City Clerk



**CITY OF ST. HELENA**

**RESOLUTION NO. 2008-75**

**APPROVING A USE PERMIT, DESIGN REVIEW, AND DEMOLITION PERMIT  
FOR THE CULINARY INSTITUTE OF AMERICA, 830 PRATT AVENUE.**

**PROPERTY OWNER:** Culinary Institute of America

**APN:** 009-101-024

**RECITALS**

1. Request of the Culinary Institute of America for a Use Permit, Demolition Permit and Design Review to construct a second dormitory building at the Vineyard Lodge site at 830 Pratt Avenue.

The project also includes a Rezoning of the parcel from A-20: Twenty Acre Agriculture to PQP: Public & Quasi-Public, as adopted with Ordinance 2008-8. Other project components at the CIA Greystone campus, 2555 Main Street, were approved with Resolutions No. 2008-76 and No. 2008-77.

3. The applicant's proposal is subject to review under the California Environmental Quality Act (CEQA). An Initial Study was prepared on the proposed project and an Environmental Checklist was utilized to focus the Initial Study on the environmental factors that may be impacted or further impacted by implementation of the proposed project. The document was posted for a review period of June 12, 2008 through July 15, 2008. A Mitigated Negative Declaration and Mitigation Monitoring and Reporting Plan were adopted with Resolution No. 2008-74.

4. The Planning Commission of the City of St. Helena, State of California, held noticed public hearings for this project on July 1, 2008 and July 15, 2008 for the purpose of reviewing the project. The Planning Commission recommended approval of the project to the City Council.

5. The City Council of the City of St. Helena, State of California, held a noticed public hearing for this project on August 26, 2008.

**FINDINGS**

NOW, THEREFORE, the City Council for the City of St. Helena resolves as follows:

- A. The City Council determined that the project is subject to CEQA and adopted a Mitigated Negative Declaration, including the recommended mitigation measures attached to the Initial Study and Mitigation Monitoring and Reporting Program (MMRP). The Mitigated Negative Declaration prepared for this project and circulated in compliance with the requirements of CEQA established that although the proposed project could have a significant effect on the environment, there would not be a significant effect in this case because revisions to the

project in the form of mitigation measures have been adopted. The City Council adopted the Mitigated Negative Declaration with the following findings:

1. This project does not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory.
  2. This project does not have impacts that are individually limited, but cumulatively considerable.
  3. This project does not have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.
- B. The City Council makes the following findings for approval of the Demolition Permit to demolish the abandoned laundry building pursuant to Section 17.164.050:
1. That, based on the public record and testimony presented at a public hearing, the building is determined not to be a significant architectural or historical building.
  2. That the demolition does not eliminate elements that are required to maintain the essential character of the neighborhood.
- C. The City Council makes the following findings for approval of a Use Permit, contained in Municipal Code Section 17.168.050 , to support the motion to approve a Use Permit to allow the proposed improvements on the subject parcel:
1. That the proposed use would not generate odors, fumes, light, glare, radiation or refuse that would be injurious to surrounding uses or to the community;
  2. That the proposed use would not generate levels of noise that adversely affect the health, safety or welfare of neighboring properties or uses;
  3. That the proposed use would not generate traffic noise in excess of the normally acceptable range identified in the General Plan;
  4. That the proposed use would not make excessive demands on the provision of public services including water supply, sewer capacity, energy supply, communication facilities, police protection and fire protection;
  5. That the proposed use would provide adequate ingress and egress to and from the proposed location;
  6. That allowing the proposed use would not conflict with the City's goal of maintaining the economic viability of a local-serving economy;
  7. That the proposed use would be compatible with surrounding land uses and would not conflict with the purpose established for the district within which it would be located;
  8. That the proposed use would not be in conflict with the City's General Plan;
  9. That the proposed use would not be injurious to public health, safety or welfare;
  10. That granting the Use Permit would not set a precedent for the approval of similar uses whose incremental effect would be detrimental to the city or would be in conflict with the General Plan;

11. That, as demonstrated on a detailed plan submitted by the applicant, adequate off-street parking to accommodate the long-term parking needs of employees and business owners and customers is available;
  12. That the capacity of surrounding streets is adequate to serve the automobile and delivery truck traffic generated by the proposed use.
- D. The City Council approves the Design Review for construction of the project subject to the applicable Design Criteria contained in Municipal Code section 17.164.030:
1. Consistency and compatibility with applicable elements of the St. Helena General Plan.
  2. Compatibility of design with the immediate environment of the site.
  3. Relationship of the design to the site.
  4. Determination that the design is compatible in areas considered by the Board as having a unified design or historical character.
  5. Whether the design promotes harmonious transition in scale and character in areas between different designated land use.
  6. Compatibility with future construction both on and off the site.
  7. Whether the architectural design of structures and their materials and colors are appropriate to the function of the project.
  8. Whether the planning and siting of the various functions and buildings on the site create an internal sense of order and provide a desirable environment for occupants, visitors and the general community.
  9. Whether the amount and arrangement of open space and landscaping are appropriate to the design and the function of the structures.
  10. Whether sufficient ancillary functions are provided to support the main functions of the project and whether they are compatible with the project's design concept.
  11. Whether access to the property and circulation systems are safe and convenient for pedestrians, cyclists and vehicles.
  12. Whether natural features are appropriately preserved and integrated with the project.
  13. Whether the materials, textures, colors and details of construction are an appropriate expression of its design concept and function and whether they are compatible with the adjacent and neighboring structure and functions.
  14. In areas considered by the Board as having a unified design character or historical character, whether the design is compatible with such character.
  15. Whether the landscape design concept for the site, as shown by the relationship of plant masses, open space, scale, plant forms and foliage textures and colors create a desirable and functional environment and whether the landscape concept depicts an appropriate unity with the various buildings on the site.
  16. Whether plant material is suitable and adaptable to the site, capable of being properly maintained on the site, and is of a variety which is suitable to the climate of St. Helena.

### RESOLUTION

- A. The City Council approves the project entitlements, as identified herein, subject to compliance with the following conditions. This project shall be in conformance with all City ordinances, rules, regulations and policies in effect at the time of issuance of the

approval. The conditions noted below are particularly pertinent to this action and shall not be construed to permit violation of other laws and policies not so listed.

1. This approval is contingent upon the approval of the Zoning Ordinance Map Amendment to change the Zoning designations from A-20: Agriculture to PQP: Public & Quasi-Public.
2. Compliance with all permit conditions shall occur in accordance with specific regulations but in all cases not later than prior to occupancy or initiation of use unless another time is set by law or by this approval. Occupancy or final inspection of a project may be withheld if all conditions, including payment of fees for services rendered by the City, are not met.
3. The applicant will defend and indemnify and hold the City, its agents, officers, and employees harmless of any claim, action or proceedings to attack, set aside, void or annul an approval so long as the City promptly notifies the applicant of any such claim, action, or proceedings and the City cooperates fully in the defense of the action or proceedings.
4. Provided they are in general compliance with the project as approved by the City Council, minor modifications may be approved by the Planning Director.
5. This permit shall run with the land and shall be binding upon all parties having any right, title or interest in the real property or any part thereof, their heirs, successors and assigns, and shall inure to their benefit and the benefit of the City of St. Helena.
6. The primary purpose of this review is for compliance with the General Plan and Zoning Ordinance. The owner/applicant is responsible for meeting with the Building Official / Fire Inspector to review compliance with Building and Fire Codes, including fire protection systems and the accessibility standards of Title 24.
7. All required fees, including planning fees, development impact fees, and building permit fees shall be paid prior to issuance of building permit unless such payment has been modified by adopted mitigation measures or conditions of approval. Fees shall be those in effect at the time of the issuance of the building permit.
8. This permit authorizes the construction of a new 12,282 sq. ft. dormitory at 830 Pratt Avenue. The new dormitory will house 60 students and 1 on-site manager. The project shall achieve LEED Silver certification at a minimum and shall be consistent with Exhibits A-E, dated 7/01/08, unless modified herein.
9. The Transient Occupancy Tax (TOT) shall only be paid for residents of the new dormitory if their stay is for a period of time of less than 30 days. Payment of TOT shall continue to be paid by residents of the existing dormitory regardless of the length of stay.
10. All uses of the property shall be in compliance with the PGP: Public & Quasi-Public zoning district regulations.

11. The applicant shall observe and comply with the no parking regulations that will be drafted, adopted and enforced by the City of St. Helena's police department for the south side of Pratt Avenue east of the rail road tracks.
12. The applicant shall be responsible for coordination and compliance with Napa County Department of Environmental Management regulations for the proposed dormitory kitchen facilities. A letter of approval for the kitchen facilities from the Napa County Department of Environmental Management will be required prior to issuance of building permits.
13. The applicant shall be responsible for compliance with all mitigations measures adopted as part of this project and listed in the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program (MMRP) adopted as part of the this permit.
14. Prior to issuance of building or demolition permits the applicant shall provide the Department of Toxic Substance Control (DTSC) with a Phase I report for review specific to the soil studies conducted at the Vineyard Lodge location.
15. No trees shall be removed from site without written approval by the St. Helena Planning Department.
16. No signs shall be installed or constructed without approval of a Sign Permit
17. Exterior lighting shall be directed or shielded to prevent glare onto the public roadway or adjacent properties.
18. The applicant shall provide for the enclosed storage of trash and separated recyclable materials. The design of the trash storage and recycling area shall be reviewed and approved by the Planning Director.
19. Fire equipment shall be inspected annually by the Fire Department.
20. Installation of a rapid entry Knox Box system, unless waived by the Fire Chief.
21. Construction activities and business operation shall be in compliance with all mitigation measures adopted in the Negative Declaration.
22. Prior to issuance of a demolition permit, the applicant shall provide the Building Department with an approval letter from the Bay Area Air Quality Management District authorizing the demolition.
23. To preserve air quality, the following practices shall be observed during construction:
  - Water all active construction areas at least twice daily.
  - Cover all trucks hauling soil, sand, and other loose materials.
  - Apply water three times daily to all unpaved access roads, parking area, and staging areas at the construction site.
  - Sweep adjacent public streets daily with water sweepers if visible soil material is carried onto streets.



24. Plant materials shall be purchased from a source that verifies they have been inspected for glassy winged sharpshooter to ensure that they will not contribute to the spread of Pierce's disease to the surrounding vineyards.
25. Landscape plans shall comply with Ordinance 92-20, Water Efficient Landscape Standards and Procedures. Plans shall be designed and verified by a landscape professional and shall include drought tolerant landscaping and low water irrigation systems. Landscaping shall not block vision from exits or at street intersections.
26. Mechanical equipment, including heating and air conditioning units shall be located away from property lines and shall be shielded or enclosed to minimize noise levels. Noise generated shall not exceed 60 dBA, Ldn.
27. The applicant and/or construction manager shall notify all contractors and subcontractors that no trespassing is allowed on adjoining properties.
28. To reduce disturbance of residents in the project vicinity, construction activities which generate noise that can be heard at the property line of any parcel of real property within the City limits shall be limited to 8:00 a.m. to 5:00 p.m. Monday through Saturday. Delivery of materials/equipment and cleaning and servicing of machines/equipment shall be limited to 7:00 a.m. to 6:00 p.m. Exceptions to these time restrictions may be granted by the Public Works Director for one of the following reasons: (1) inclement weather affecting work, (2) emergency work, or (3) other work, if work and equipment will not create noise that may be unreasonably offensive to neighbors as to constitute a nuisance. The City Engineer must be notified and give approval in advance of such work. No construction activities shall occur on Sundays or federal or local holidays that generate noise that can be heard at the property line of any parcel of real property within the City limits.
29. This property adjoins an agricultural district. There exists a right-to-farm the adjoining property. There is a good faith expectation that no complaints will occur regarding legal, normal agricultural activities on the adjacent land. Such activities may include day or night disbursement of chemicals, and creation of dust, noise, or fumes.

Approved at a Regular Meeting of the St. Helena City Council on August 26, 2008 by the following vote:

AYES: Councilmembers Schoch, Novak, Potter, Sklar, Mayor Britton

NOES: None

APPROVED:

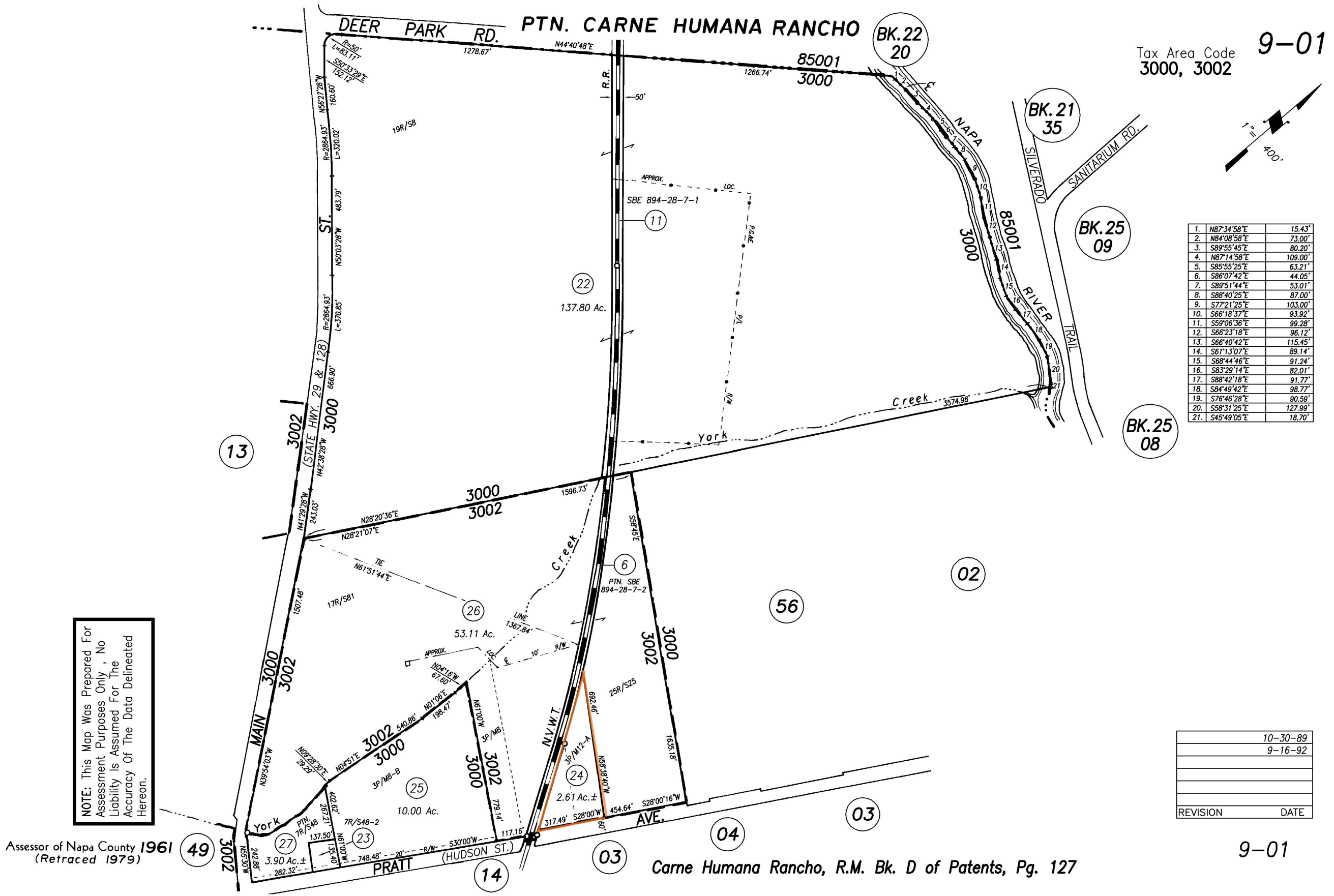
  
Delford Britton  
Mayor

ATTEST:

  
Delia Guijosa  
City Clerk







|     |             |         |
|-----|-------------|---------|
| 1.  | N87°34'58"E | 15.43'  |
| 2.  | N84°08'58"E | 73.00'  |
| 3.  | S89°55'45"E | 80.20'  |
| 4.  | N87°14'58"E | 109.00' |
| 5.  | S85°55'25"E | 63.21'  |
| 6.  | S86°07'42"E | 44.05'  |
| 7.  | S89°51'44"E | 53.01'  |
| 8.  | S88°40'25"E | 87.00'  |
| 9.  | S77°21'25"E | 103.00' |
| 10. | S66°18'37"E | 93.92'  |
| 11. | S59°06'36"E | 99.28'  |
| 12. | S66°23'18"E | 96.12'  |
| 13. | S66°40'42"E | 115.45' |
| 14. | S61°13'07"E | 89.14'  |
| 15. | S68°44'46"E | 91.24'  |
| 16. | S83°29'14"E | 82.01'  |
| 17. | S88°42'18"E | 91.77'  |
| 18. | S84°49'42"E | 98.77'  |
| 19. | S76°46'28"E | 90.59'  |
| 20. | S58°31'25"E | 127.99' |
| 21. | S45°49'05"E | 18.70'  |

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|          | 10-30-89 |
|          | 9-16-92  |
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|          |          |
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| REVISION | DATE     |









Attachment 5  
**RECEIVED**  
 PLANNING DEPARTMENT

JUN 28 2016

**PRATT AVENUE HOUSING PROJECT DESCRIPTION**

City of St. Helena

The CIA was fortunate to be able to acquire the former Marlinda facility to provide additional housing. This flat site, located extremely close to the Greystone educational facility, provided an opportunity to provide essential needed housing at an affordable cost with the added benefit of reducing pressure on the supply of affordable rental housing in the City of St. Helena. The property was zoned Public-Quasi Public in 2008 because it is an intrinsic element of the CIA's efforts to provide world-class education to students seeking professional employment in the hospitality industry.

With the expansion to 300 students, the Master Plan requires a net increase to amount of student housing at the Vineyard Lodge site. The Use Permit Amendments will authorize approval of:

- Demolition of the 15,050 sf existing Vineyard Lodge 1, an aged and inefficient residential facility. The CIA will construct three new lodges, ranging in size from 11,380 sf to 17,885 sf, for total new construction of 40,645 sf, or a net increase of 25,595 sf after the demolition of Vineyard Lodge 1.
- These three lodges will contain 164 new beds primarily in double rooms, with a few single units (a net gain of 123 beds with the elimination of 41 beds due to the demolition of Vineyard Lodge 1). Combined with the 60 beds in the existing Vineyard Lodge 2 ("VL 2") there will be a maximum occupancy of 224 residents on-site.
- With its PQP: Public & Quasi-Public zoning the property is properly zoned for the development of additional student housing in conjunction with the educational program at Greystone. Furthermore, under the PQP: Public & Quasi-Public zoning district, property setbacks and other design characteristics are not required to comply with adjacent zoning standards, but are determined through the Use Permit process. The CIA is mindful of the potential visual impacts of the project for neighbors and passerby. The CIA will retain the current large camphor trees located along Pratt Avenue that provide substantial existing screening of the current and proposed improvements, and additional landscape screening will be added as needed. While this property has agricultural properties surrounding the site, the largest neighbor, located on two sides is the Beringer winery which operates a large winery to the west, and has vineyard and sewage treatment ponds on the east. PQP zoning requires that these developments honor the "right to farm" on adjacent property and the Vineyard Lodge has never had an issue with the agricultural activities occurring alongside. In fact, Treasury Wine Estates, the owner of the adjacent property, has agreed to formalize an easement for shared use of the existing roadway partially owned by the CIA and Treasury.

The CIA has made numerous modifications to its plans for housing at the Vineyard Lodge. Even before a community meeting in April, the CIA revised its housing design to

eliminate rooms at either end of the proposed third floor units along Pratt Avenue so that the roof could be sloped downward to minimize the bulking of the buildings. In addition, the lodges were oriented to minimize the views of the larger sides of the buildings to passing motorists and pedestrians. Through screening and architecture, the CIA sought to minimize the visual impacts of the buildings along Pratt Avenue.

After the April community meeting facilitated by the Planning Department, the CIA reconsidered its site design to address the following issues that were raised by the staff and the public:

1. A concern about "massing" of the buildings by the inclusion of three story buildings along Pratt Avenue.

2. A request that the project be redesigned so that buildings would be set further back from Pratt Avenue to permit screening to be retained and added, and to minimize the visual impact of buildings along Pratt Avenue.

3. A desire for a reduction in the total capacity of the housing, and a request that the number of single rooms (which were predominant) be modified so that double rooms would be the primary room occupancy design, which would reduce the total square footage required for housing students.

4. Reassurance that noise factors on-site would not adversely impact neighboring properties.

5. A concern about potential adverse impacts on neighbors from student intrusions onto neighboring lands.

6. City staff voiced concerns regarding a lack of cohesion and connection with the existing VL 2 that will be retained.

The CIA has exhaustively analyzed possible revisions to the project that would address neighborhood concerns. After much thought and discussion, the submitted plans have been revised to address the design concerns noted above. The project's new design proposes the following improvements:

- The project's proposed buildings along Pratt Avenue have been pushed back an additional 15 feet to provide a 20' setback. Further, the project has modified the building design to eliminate any three story lodges along Pratt Avenue. Building B, located directly along Pratt Avenue, is entirely a two story building. Building A, an L-shaped building with a wing directed toward Pratt Avenue runs westward into the site as a two story building until it turns southward as a three story building on the interior of the site. Building A remains a two-story design for 151'6" from the innermost end of the current parking indent along Pratt Avenue, or 177'0 from the standard width of Pratt Avenue adjacent to all other properties along the entire length of Pratt Avenue other than the Vineyard Lodge property. Building C, which runs along the southernmost boundary line of the Vineyard Lodge site along the Napa Valley Wine Train tracks is three



stories in height, but the building is 90' from the current widened edge of Pratt Avenue, or 116' from the northern boundary of the travel-way of Pratt Avenue that currently exists along its entire north side.

- Through a redesign of the Lodge interiors, the CIA reduced student capacity by 12 beds, while also reducing total new construction from 42,610 sf to 40,645, a reduction of 1,965 sf, almost 10% of the total net new construction of 25,595 after the removal of Vineyard Lodge 1. The reduction in capacity was accomplished in substantial part due to the inclusion of substantially all double-rooms rather than the original focus on single room units.

- The CIA undertook a noise study to address concerns that site noise would adversely impact on neighboring properties.

- The CIA reviewed its records and determined that the perception that numerous complaints had been made regarding student intrusions onto neighboring properties was not supported by governmental records. The on-site director has the support of the CIA's security staff to ensure compliance with trespass and nuisance violations, and violators will be expelled.

- The CIA integrated VL 2 into the site design by providing for a central plaza, reducing the width of the road between VL 2 and Building A, eliminating parking in that central area and adding porches the VL 2 side of Building A so that the existing lodge no longer looked at the "back side" of Building A.

The CIA has continuously sought to provide as much housing for its students (who are employees at the CIA and throughout the St. Helena area) as possible, far in excess of that offered by any other businesses or educational facilities in St. Helena. Housing is of a serious concern to the residents and employees of St. Helena. The CIA has had to lease several houses in the City of St. Helena for its students. This housing plan has been developed to reduce the number of students who need to obtain housing off campus, thereby creating additional affordable rental housing options for other St. Helena residents.

The CIA currently has housing for 38 students in a Guest House constructed at the northern edge of the Greystone site and currently has 101 beds on the Vineyard Lodge site providing total housing capacity for 139 beds. While it proposes an increase of 100 students to its current 200 student capacity at Greystone, the new occupancy at Vineyard Lodge will be 224 beds, an increase in occupancy by 123 beds. Between existing housing at Greystone and Vineyard Lodge, and the new housing at Vineyard Lodge, the CIA will have housing for 262 of its total 300 students.

At the community meeting in April, suggestions were made that the CIA should develop some or all of this additional student housing at other sites, including the Greystone site. The CIA is fully aware of the market for housing and additional developable land in the City of St. Helena and no viable alternative site is available. Land surrounding the City is located within the County of Napa, and is not zoned for this kind of development. And, development of additional housing at Greystone is not viable. The current parking at Greystone will continue to be needed after the Master Plan because there will still be community and private events

requiring parking so the physical removal of needed parking will interfere with the safe and efficient operation of Greystone. The vast majority of the undeveloped land on-site is on steep slopes (and the land about the Historic Greystone Building is subject to a conservation easement that prohibits additional development). And, the cost to develop the Carpy House into an additional dorm would provide minimal additional beds at a prohibitively high cost. For financial, educational, and social programming reasons, students are best served by a compact campus where they obtain housing at an affordable cost.

The CIA's AOS educational program is a total two year program for students who continue their education by employment either on campus or at restaurants and other hospitality facilities in and around St. Helena. CIA students provide a substantial portion of the work force in local restaurants, and the CIA believes it is in the best interests of the citizens of St. Helena, and for its students, for the CIA to provide substantially all of its housing on-site at an affordable price rather than requiring its students to obtain housing in competition with other residents of St. Helena. The CIA believes its mission to provide adequate housing for essentially all of its students is a model workforce housing program that reduces housing demand in the local community. The CIA is eager to discuss with its neighbors, and the City, how to address this important housing need during a severe housing shortage within the City, and how to mitigate the visual impacts on its neighbors.

The CIA is mindful of the City of St. Helena's concerns regarding possible impacts on its infrastructure. The CIA believes that the project will mitigate all such concerns:

- Water Issues. Upon the full implementation of the Master Plan, the combined water demand from the Greystone site and the Pratt Avenue housing will be "water neutral." Under the current Water Agreement with the City, the Pratt Avenue site is allocated 4,750 gpd for its occupants. As noted in Summit Engineering's Water Availability Analysis, there is ample additional water available under the Greystone Water Agreement for the combined Water Agreements at these two sites to provide adequate water within the total current allotment from the City of St. Helena. Furthermore, the potential availability of domestic water from well water on the Greystone site, will ensure that the combined water demand from these two properties will be "water neutral" even after the full implementation of the Master Plan. The two Water Agreements have been inter-connected since the acquisition of the Vineyard Lodge property and transfers of water between the two Agreements has been allowed by the City in the past. As a result, the CIA proposes that they be combined into a single combined Water Agreement for both properties.
- Traffic Issues. Upon full implementation of the Mater Plan, the traffic impacts will be reduced along Main Street, and there will be a negligible change at the intersection of Pratt Avenue and Highway 29/128. As noted in the Crane Transportation Group's ("CTG") Traffic and Parking Study, the relocation of employees and programs to Copia, and the substantial reduction in the size and period of operation with the new restaurant will substantially reduce daily traffic to Greystone. In addition, students residing at Vineyard Lodge are not allowed to



park at Greystone, they must utilize the existing CIA shuttle service, or walk to the site. The CIA will acquire a larger bus (32 seats) as well as its two existing shuttles (22 & 14 seats respectively) to be utilized in its shuttle service, which will allow more students to be transported between Vineyard Lodge and Greystone with the same number of trips. At the same time, the number of larger conferences and events that create the greatest traffic and parking demand at Greystone are being relocated to Copia. As a result, the CTG study concluded that the expansion of the housing capacity at Vineyard Lodge by 123 beds only increases traffic by the negligible amount of 4 trips per day at the Pratt Avenue – Highway 29/128 intersection.

- Parking Issues. Upon implementation of the Master Plan, the parking capacity for students at Vineyard Lodge will be adequate. The CIA has substantial experience operating the housing at Vineyard Lodge as well as the housing on its Greystone site and its campus in Hyde Park, N.Y. The Vineyard Lodge site currently has excess parking capacity. Existing parking permits on-site total only 31% of the capacity of 101 person capacity of the existing dormitories. The accompanying Variance Application requests a reduction in the required parking capacity on-site because most students residing in on-campus housing do not bring their own vehicles when traveling to attend Greystone. Based on the current 31% parking permit need, the CIA has determined that only 31% of the total 224 students will require parking permits, for a total of 69 spaces. To address the needs of students who do not bring vehicles to the Vineyard Lodge dormitories the CIA will provide space for 3 shared rental cars to address students' sporadic needs for access to their own automobiles. Such need is substantially diminished because no Vineyard Lodge residents are allowed to park at Greystone; the shuttles provided by the CIA (including the larger 32 passenger capacity bus to be introduced to the shuttle schedule) provide convenient travel to Greystone; and the CIA uses its shuttles to pick up and deliver students from nearby airports and other public transit sites. The included Variance requests reduced parking requirements to reflect the reduced need for parking and student-owned vehicles.
- Effluent Issues. Summit Engineering's Wastewater Feasibility Study has concluded that there will not be a significant impact on St. Helena's wastewater disposal system due to the expansion of available storage capacity, pretreatment options, and flow regulation.

The CIA believes that it has the duty to improve the rental housing market in St. Helena, and to provide affordable housing for its students. The CIA also recognizes neighbor concerns regarding potential adverse impacts, and has made a substantial effort to address those concerns with an improved design.

RECEIVED  
PLANNING DEPARTMENT

JUL 12 2016

City of St. Helena

**VINEYARD LODGE 1 DEMOLITION**  
**PROJECT DESCRIPTION**

The CIA was fortunate to be able to acquire the former Marlinda facility to provide additional housing. This flat site, located extremely close to the Greystone educational facility, provided an opportunity to provide essential needed housing at an affordable cost with the added benefit of reducing pressure on the supply of affordable rental housing in the City of St. Helena. The property was zoned Public-Quasi Public in 2008 because it is an intrinsic element of the CIA's efforts to provide world-class education to students seeking professional employment in the hospitality industry.

With the expansion to 300 students, the Master Plan requires a net increase to amount of student housing at the Vineyard Lodge site. The Use Permit Amendments, dated June 22, 2016, included the following description of proposed demolition work:

- Demolition of the 15,050 sf existing Vineyard Lodge 1, an aged and inefficient residential facility. The CIA will construct three new lodges, ranging in size from 11,380 sf to 17,885 sf, for total new construction of 40,645 sf, or a net increase of 25,595 sf after the demolition of Vineyard Lodge 1.

The proposed demolition of Vineyard Lodge 1 meets the criteria set out for demolition of a structure in the St. Helena Municipal Code for the following:

- The existing building is not architecturally or historically significant.  
*Built at an unknown date, the original structure at the site was a residential building. Multiple additions over numerous years created and expanded the convalescent hospital facility and completely engulfed and incorporated the original residential structure within its walls.*
- The demolition does not eliminate elements that are required to maintain the essential character of the neighborhood.  
*The existing structure does not contain any character defining features.*

As stated in the Use Permit submittal, the CIA believes that it has the duty to improve the rental housing market in St. Helena, and to provide affordable housing for its students. Demolition of this existing building is necessary to achieve this goal.

**AMENDED AND RESTATED  
PROJECT STATEMENT FOR VARIANCE REQUEST**

The Culinary Institute of America ("CIA") hereby resubmits its request of two variances in conjunction with the expansion of housing at 830 Pratt Avenue ("Vineyard Lodge") in conjunction with its response to City comments.

1. Waiver of 36' Setback on the Northwestern Side of Pratt Avenue. Under Municipal Code Section 17.112.050, a special setback requirement of 36' applies from the railroad tracks to the Napa River on the northwesterly side of Pratt Avenue. The property is, however, zoned P:QP – Public Quasi-Public which provides that standard setbacks do not apply, but that the setback shall be established "through the Use Permit process". The CIA has doubts whether the 36' special setback applies to a property with this zoning designation which is intended to allow a waiver of setback and development standards that would ordinarily apply.

Section 17.112.050 does not specify how to measure the 36' setback –whether from the property line or the centerline of Pratt Avenue. All of these parcels on the Northwestern side of Pratt Avenue are located in the A-20 Zoning District (which was the base zoning for 830 Pratt Avenue prior to its rezoning to P-QP Zoning). Under Section 17.20.060, the 50' front yard setback shall be measured "from the centerline of the abutting streets". Many of the buildings located along this side of Pratt Avenue are located fairly close to Pratt Avenue, there is the possibility that the 36' setback was imposed not to increase the quantity of setback along Pratt Avenue, but to recognize many of these residences could not meet a 50' setback from the centerline of an expanded city ROW after dedications for Right of Way purposes. If so, the 36' setback would be measured from the centerline, rather than the property line.

Even if the ROW should be measured from the property line, a substantial number of the nearby residences that would be subject to this 36' setback do not comply with that requirement, even when the circumstances show that the CIA's property was subject to a uniquely severe ROW dedication not imposed on its neighbors.

The CIA has extensively investigated the extent of the City Right of Way ("ROW") along Pratt Avenue based on several parcel maps that were recorded where dedications for an expanded ROW were included as a condition of approval. Those Parcel Maps include 3 PM 12 recorded June 22, 1971 by which the currently configured 830 Pratt Avenue parcel was created. Under that Parcel Map, the road frontage along this parcel, and the adjacent vineyard parcel not owned by Treasury Wine Estates, was subject to the dedication of a 20' strip of land along the northwesterly side of Pratt Avenue, resulting in a 60' ROW. Based on this Parcel Map, we have determined that the yellow striped centerline of Pratt Avenue is located almost precisely in the middle of the preexisting 40' ROW, which makes that centerline 40' from the property line. As can be seen by the other enclosed Parcel Maps, no other properties along the northwesterly side of Pratt Avenue were required to dedicate a 20' strip for ROW purposes, all of those properties were required to merely dedicate a 10' strip, which resulted in those property lines being located only 30' from the centerline of the existing roadway. Moreover, once Pratt Avenue curves to the north to run parallel to the Napa River, those property owners appear to have made no dedication

for ROW purposes, so those property lines are located only 20' from the apparent centerline of Pratt Avenue (as is true for the closest residence to the CIA's property).

As a result, the CIA's property line intrudes 10', if not 20' further into its parcel than its neighboring parcels which theoretically are subject to the special 36' setback. Notwithstanding the other parcels along Pratt Avenue have a lesser functional setback from the centerline of Pratt Avenue than the CIA's parcel, six of those homes (almost one-half of the homes located along this side of Pratt Avenue) fail to meet the 36' setback requirement. Those homes, and the setback from the property line determined in Google Earth (photos attached), are as follows:

|                  |        |                                             |
|------------------|--------|---------------------------------------------|
| 196 Pratt Avenue | 25.04' | (no ROW dedication)                         |
| 200 Pratt Avenue | 31.85' | (no ROW dedication)                         |
| 345 Pratt Avenue | 17.25' | (10' ROW dedication)                        |
| 492 Pratt Avenue | 30.04' | (10' ROW dedication)                        |
| 640 Pratt Avenue | 20.04' | (10' ROW dedication)                        |
| 652 Pratt Avenue | 32.02' | (NO ROW dedication)(CIA's closest neighbor) |

If each of these parcels were also subject to the same 20' ROW dedication as was imposed on the CIA's parcels, these structures would be located from 5.04' to 20'04' from the property line, showing that the CIA's property at 830 Pratt Avenue would be substantially detrimentally treated compared to its immediate neighbors if the 36' setback requirement is rigidly imposed on this property. Moreover, the proposed project will increase the setback that currently exists for the existing building located closest to Pratt Avenue).

In conjunction with this project, the CIA will be demolishing the one story dormitory known as Vineyard Lodge 1 (the former Marlinda facility). Along Pratt Avenue the 20' dedication for ROW purposes allowed the installation of a parking "indent" that extends paving beyond the normal travel-way for Pratt Avenue. Adjacent to the indent is an existing sidewalk. Based on survey data, the CIA has determined that the Vineyard Lodge property line is located on the interior of that sidewalk. As a result, Vineyard Lodge 1 is currently located approximately seven (7) feet from the property line, substantially within the 36' setback. Nonetheless, in an effort to dramatically reduce the potential impacts on neighboring properties, the CIA has proposed to increase the setback so the enclosed plans provide for a 20' setback from the property line, which is approximately 36' from the travel-way for Pratt Avenue (effectively providing a 36' foot buffer along Pratt Avenue that may have been the intention of the 36' setback.

Moreover, the functional impact of the new improvements will be substantially less than results from the existing residences along Pratt Avenue that encroach into the 36' setback. Those six properties generally have no trees or other screening to obscure visual sight of the residence, including the two story home recently remodeled at 345 Pratt Avenue. In contrast, the CIA's buildings along Pratt, also two stories in height, will be partially screened from the outset by large, mature camphor trees that are located along a good portion of the site frontage. As a result, the variance is necessary for the preservation and enjoyment of substantial property rights which other properties in the same zoning district and in the same vicinity enjoy, particularly when mature screening dramatically blocks the view of a large portion of the new dormitories

closest to Pratt Avenue. Given the P-QP zoning applicable to the property which is appropriately zoned for the support of a private school, and the location of the new buildings approximately 12' – 13' further from Pratt Avenue than already exists on the property, the CIA does not believe that a substantial negative effect on other properties will arise by approval of this Variance.

## 2. Variance from Parking Standards.

Under Municipal Code Section 7.124.30 (A)(3) the St. Helena City parking code requires two spaces for the "resident owner" and one space for each guest room (apparently for each bed). for a total of 226 parking spaces for the 224 dormitory beds contained in the Vineyard Lodge by classifying this facility as a "rooming, boarding, or lodging house. This calculation results in a requirement of 154 spaces more than the 72 parking spaces calculated by providing for 0.31 parking spaces per bed as has been true in the operation of the 101 bed facility at this property. That parking ratio is satisfactory for this project because these students, for the most part, do not bring vehicles to campus as is true for most college campuses where dormitories and residence halls are provided. The students are urged not to bring vehicles because they have no need for vehicles to travel between their housing and the educational facilities at Greystone. Moreover, the CIA provides an "on demand" car rental service on-site that provides access to a vehicle when necessary. As a result, there is no need for additional parking on-site.

Based on the nature of a residence hall operation in an educational setting the CIA requests a variance from this parking requirement because this property is uniquely operated compared to a standard "lodging house". In the typical lodging house the facility offers no transportation and the occupants do not travel jointly to and from work or school. In the Vineyard Lodge property the residents all have to be enrolled in the CIA at Greystone, they have to take the shuttle to their full-time educational program, they have to travel to Napa from elsewhere from which it may be very inconvenient to drive, and they have to be issued a parking permit to be allowed to park on the premises. As indicated in the Crane Transportation Group Traffic and Parking Report, the situation is more analogous to the classification under Section 7.124.30 (A)(6): "Rest homes, convalescent hospitals, residential care and similar group care facilities" which require only one parking space per four beds (interestingly, this property was operated as a convalescent hospital for decades).

The P:QP zoning district applicable to this property can also be applicable to Churches, Chapels, Funeral Homes, Auditoriums, Stadiums and Similar Places of Assembly. But, contrary to the requirement of only one parking space per four seats at such facilities under subsection (B)(1), the application of the lodging house parking requirement means the CIA is obligated to provide one parking space per occupant, when there is no basis for assuming that four persons will occupy each vehicle traveling to Similar Places of Assembly. As a result, the CIA is not entitled to enjoy the same assumptions regarding this similar zoned property, particularly when the CIA has far more ability to control the travel and parking activities of its residents.

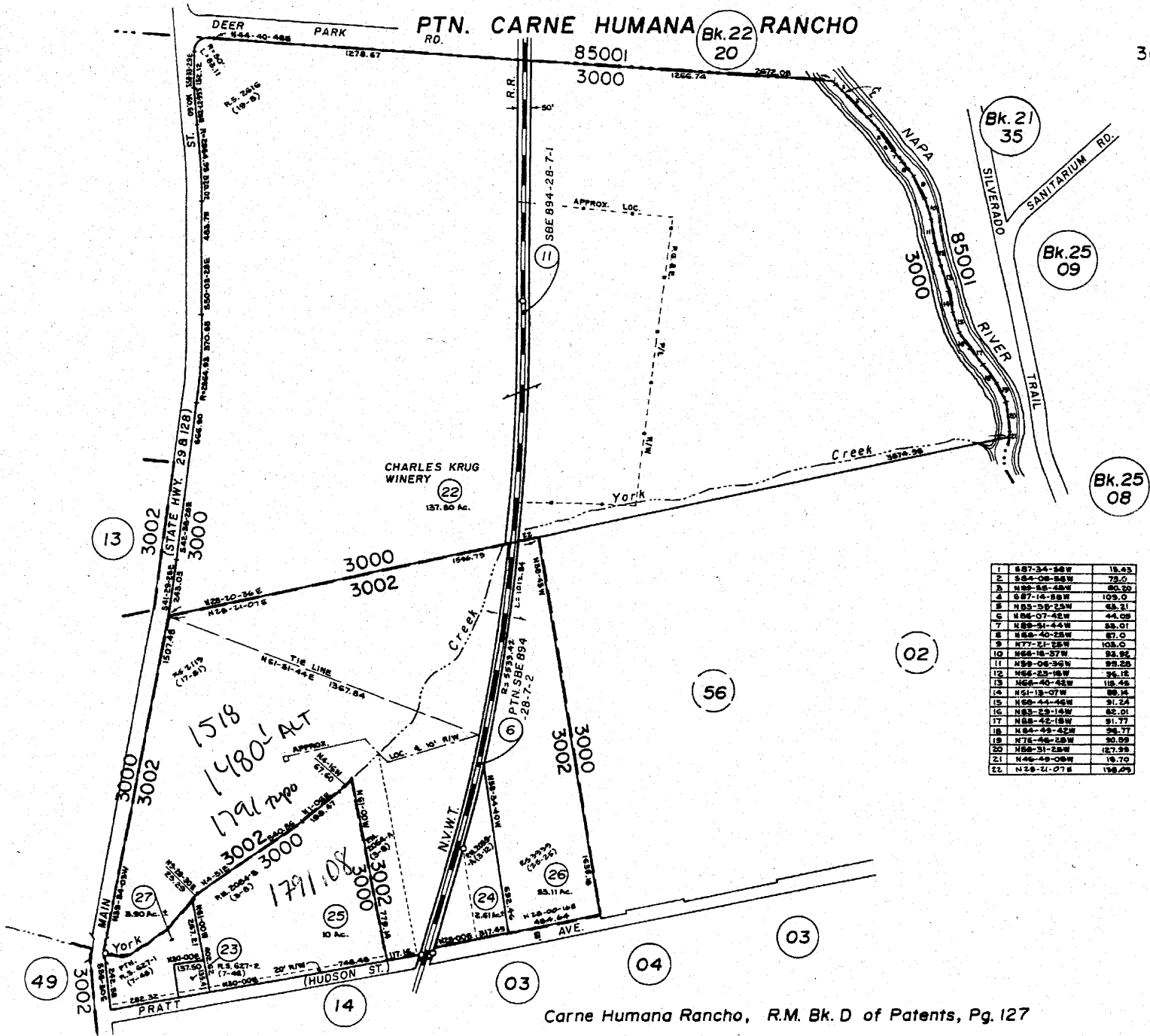
The approval of this variance will not adversely impact on the property's neighbors, particularly if the conditions applicable to the Variance restrict parking in the area that would adversely impact nearby residents. The CIA is agreeable to developing a parking management plan to ensure that condition is satisfied.



Recud. 3-21-06

NOTE: This Map Was Prepared For  
Assessment Purposes Only. No  
Liability Is Assumed For The  
Accuracy Of The Data Delineated  
Hereon.

Assessor of Napa County  
REVISIONS 1961  
(Retraced 1979)  
10-10-89



Tax Area Code 9-01  
3002, 3000



9-01





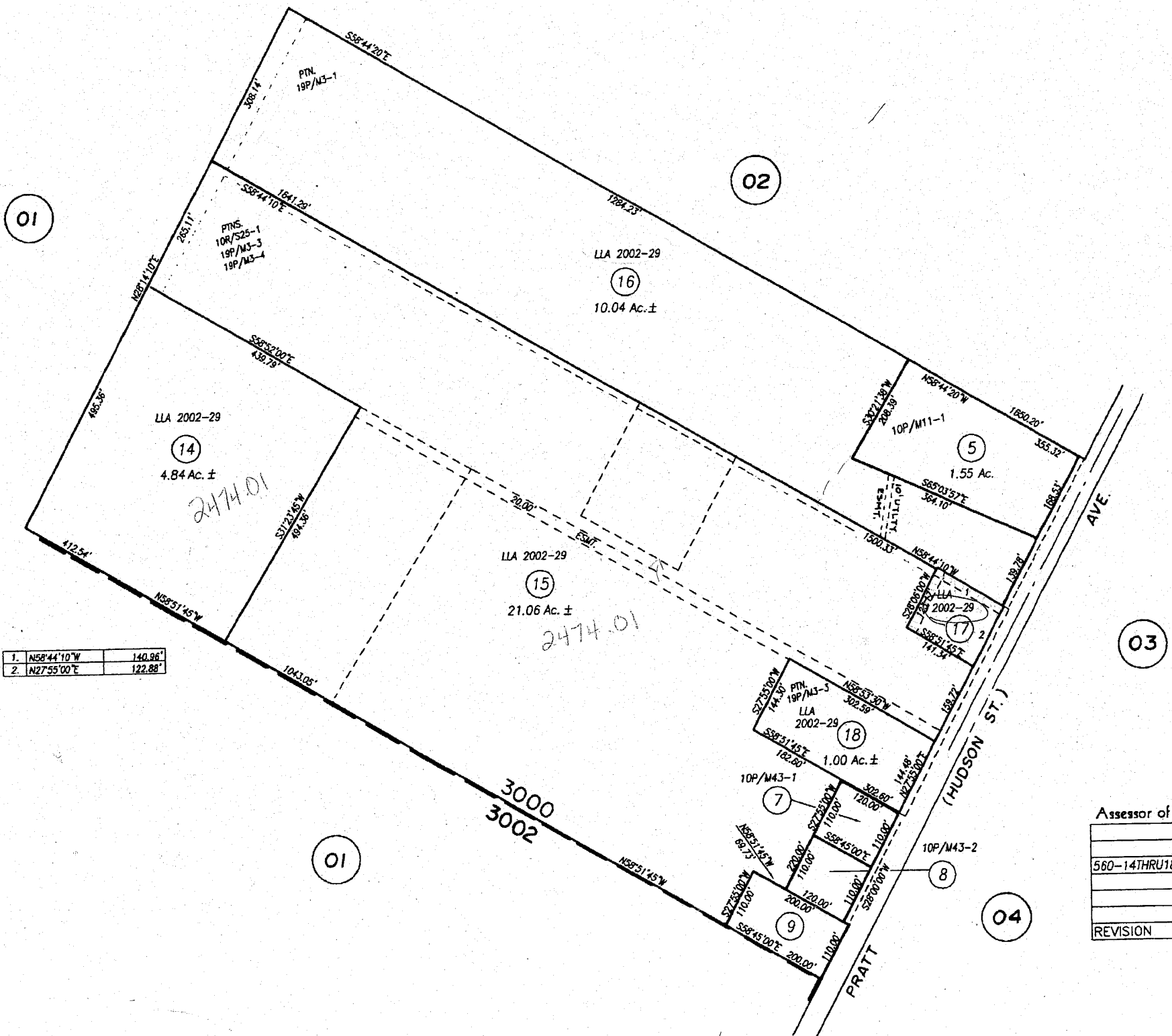
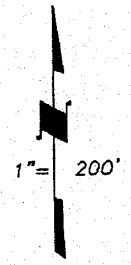
# COUNTY ASSESSOR'S PARCEL MAP

## PTN. CARNE HUMANA RANCHO

Revised 4-7-06

Tax Area Code  
3000

**9-56**  
was ptn. 9-01



|    |             |         |
|----|-------------|---------|
| 1. | N58°44'10"W | 140.86' |
| 2. | N27°55'00"E | 122.88' |

NOTE: This Map Was Prepared For Assessment Purposes Only , No Liability Is Assumed For The Accuracy Of The Data Delineated Hereon.

| Assessor of Napa County  |      |
|--------------------------|------|
| 10-30-89                 | 1979 |
| 12-11-91                 |      |
| 560-14THRU18 LLA 2-20-03 |      |
| REVISION                 | DATE |

9-56

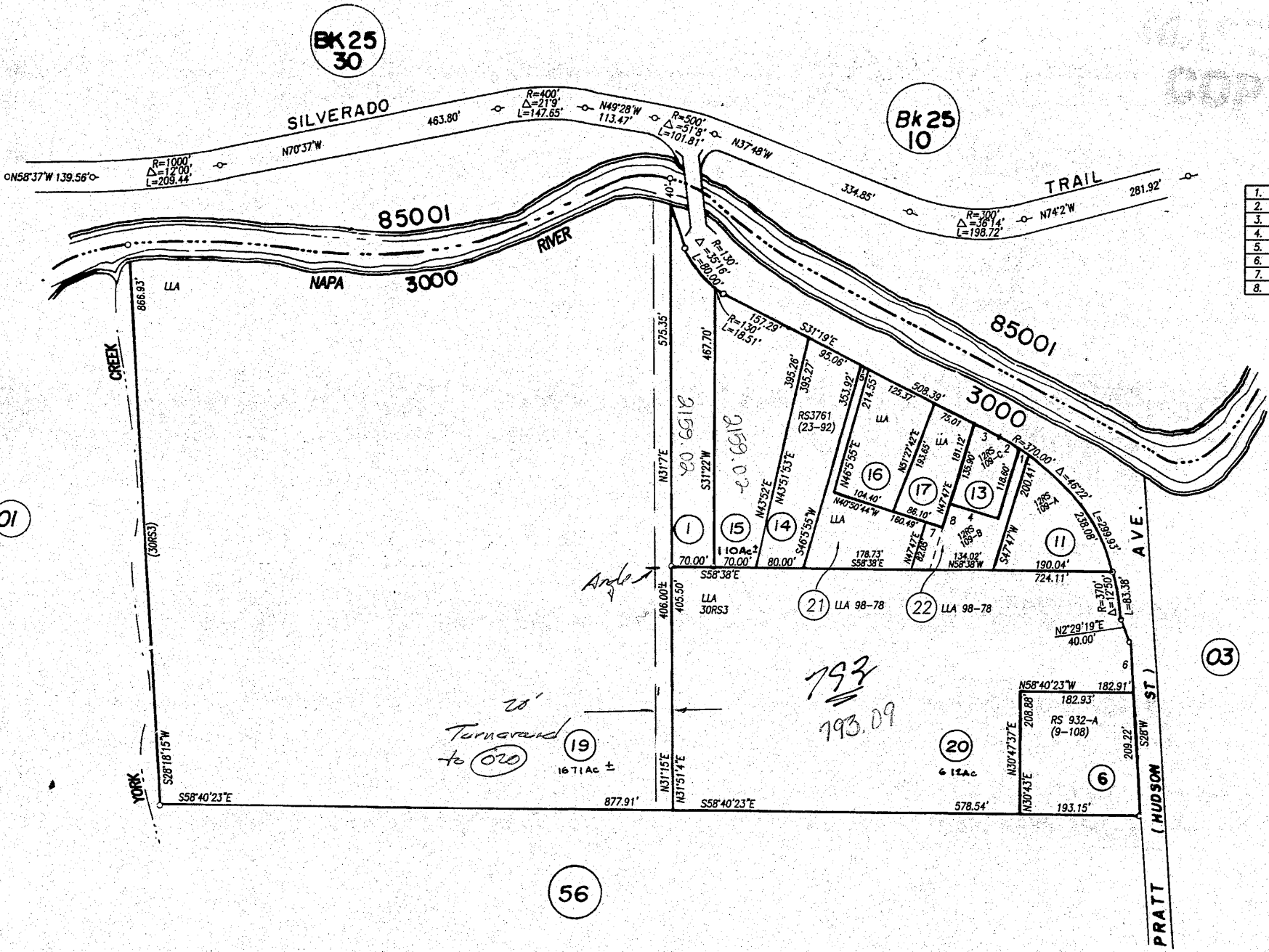
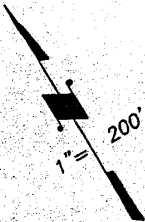


POR. RANCHO CARNE HUMANA  
R M Bk D of Patents, Pg.127

DEC 08 1999

Tax Area Code  
3000

9-02



|                |          |
|----------------|----------|
| 1. R=370.00'   | L=21.10' |
| 2. R=370.00'   | L=40.25' |
| 3. N31°19'W    | 40.27'   |
| 4. N42°13'W    | 78.57'   |
| 5. N31°19'W    | 15.37'   |
| 6. N27°39'19"E | 76.42'   |
| 7. S40°50'44"E | 30.01'   |
| 8. N47°47'E    | 45.14'   |

|                 |          |
|-----------------|----------|
|                 | 3-6-68   |
|                 | 12-13-84 |
|                 | 3-11-91  |
|                 | 11-23-93 |
|                 | 4-20-94  |
|                 | 7-17-95  |
| 020-21 & 22 LLA | 4-20-99  |
| REVISION        | DATE     |

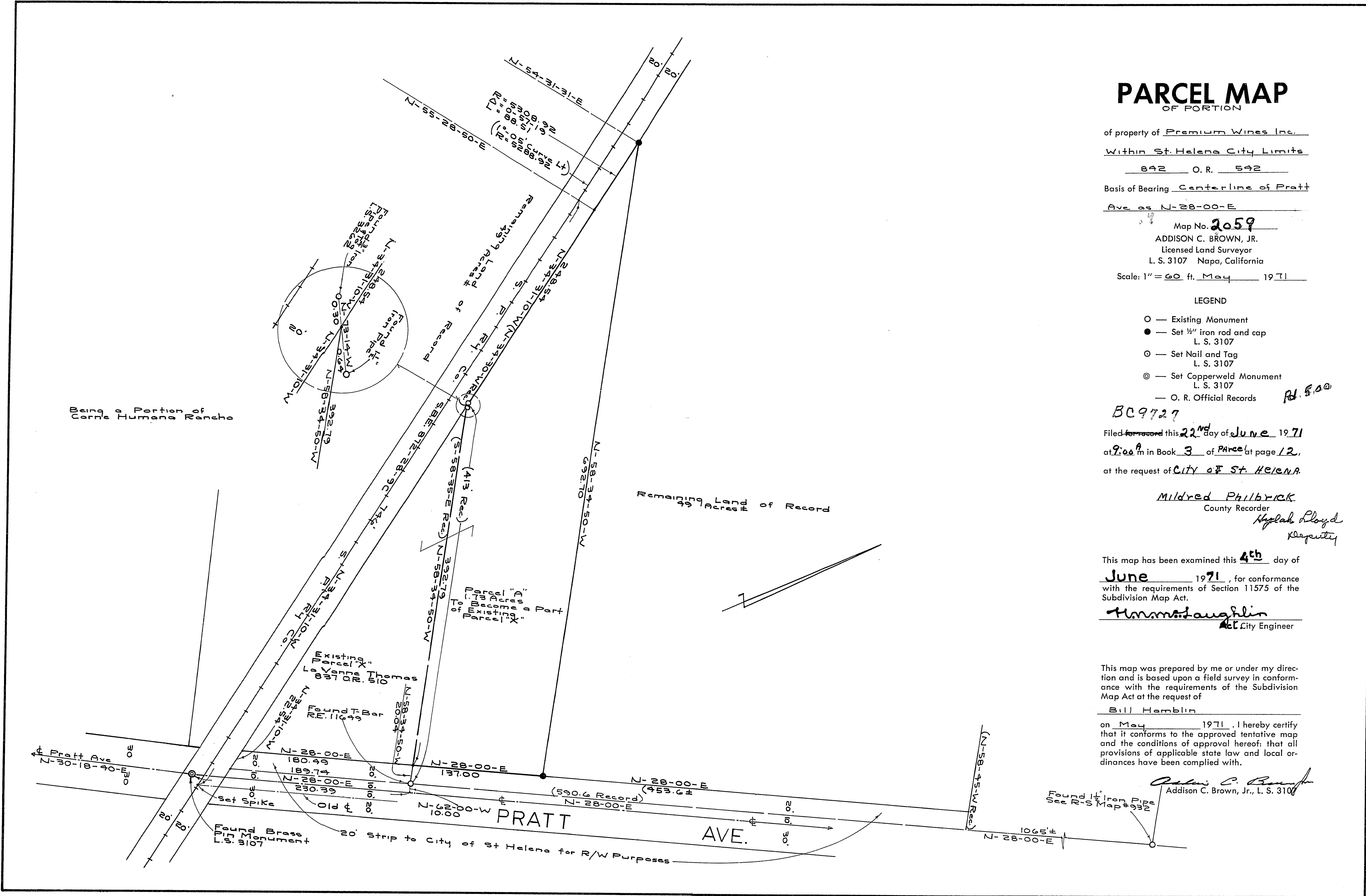
NOTE: This Map Was Prepared For  
Assessment Purposes Only , No  
Liability Is Assumed For The  
Accuracy Of The Data Delineated  
Hereon.

CITY OF ST. HELENA  
Assessor's Map Bk.9 Pg. 02  
County of Napa, Calif.  
1954-60-61





3 PM 12



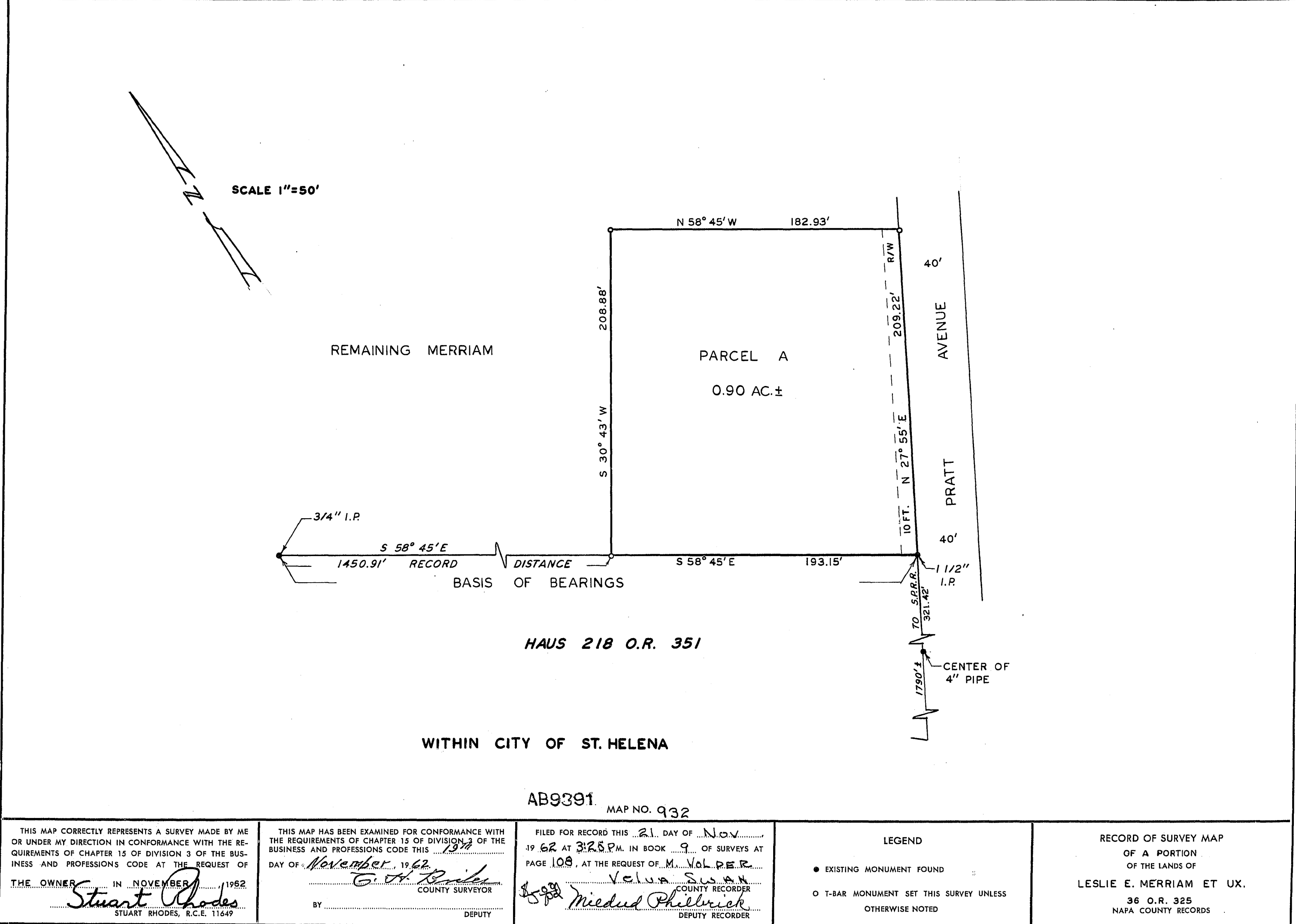






9 108

#932 Leslie E. Merriam, et ux



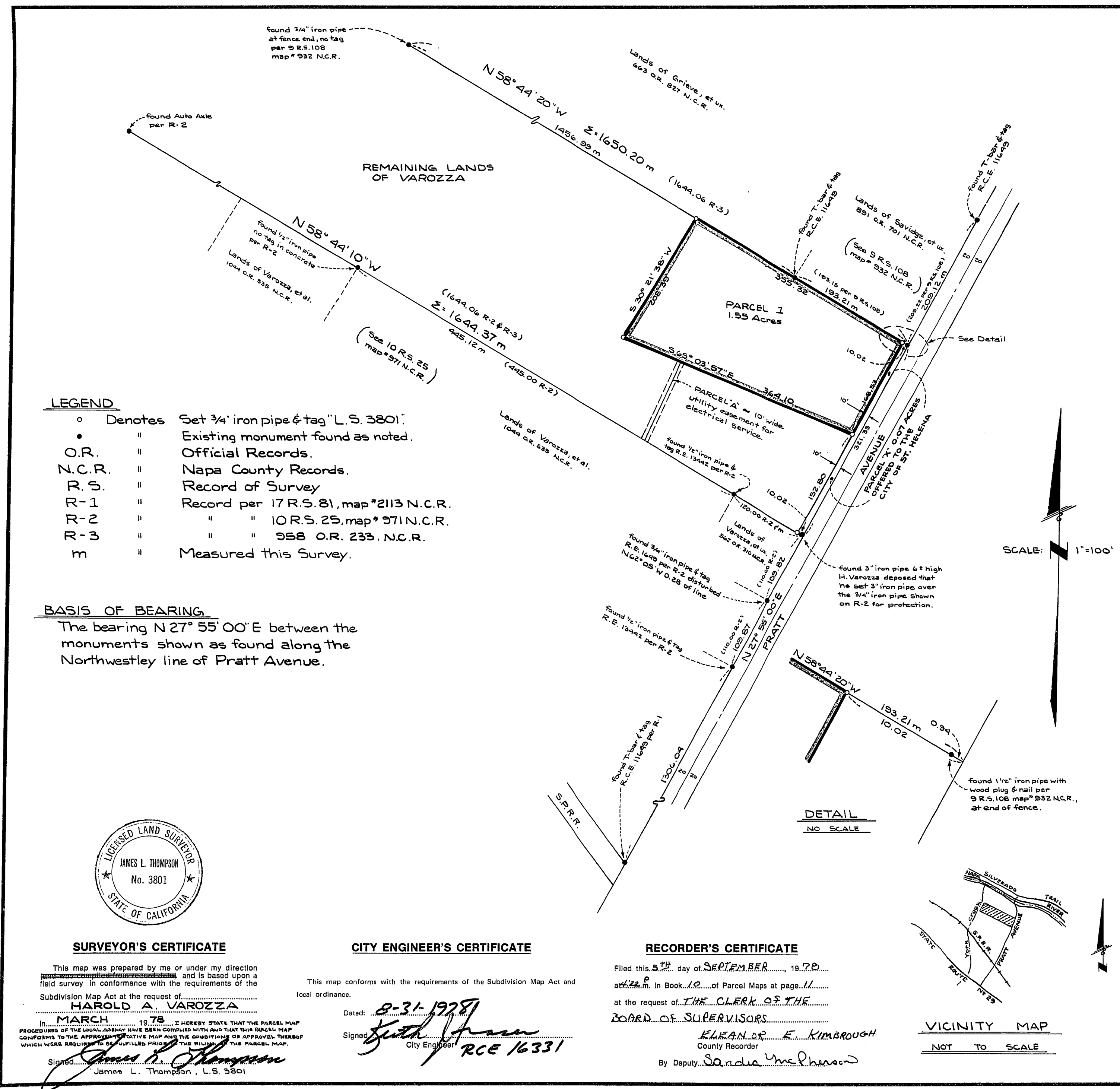
#932 Leslie E. Merriam, et ux







10 PM11



**OWNERS' CERTIFICATE**

The undersigned do hereby certify that they are the only entities having any record title in the land included within the Subdivision in Napa County, California designated on this Parcel Map entitled "Parcel Map of the lands of Harold A. Varozza, et ux.", and that they do hereby consent to the preparation and recordation of said map, and that they do hereby offer for public use, that certain parcel of land designated on this map as Parcel "X".

In witness whereof they have caused these presents to be executed this 31st day of July, 1978.

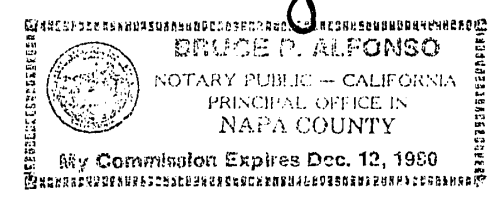
Harold A. Varozza Irene T. Varozza  
Harold A. Varozza Irene T. Varozza

State of California }  
County of Napa } SS

On this 31st day of July, 1978, before me, a Notary Public in and for the State of California, personally appeared Harold A. Varozza and Irene T. Varozza, known to me to be the persons whose names subscribed to the within instrument and acknowledged that they executed the same.

Witness my hand and official seal.

Signed: Bruce P. Alfonso



**CITY CLERK'S CERTIFICATE**

I, Lynette Denton, City Clerk of the City of St. Helena Napa County, California, do hereby certify that on the 31st day of July, 1978, the map entitled "Parcel Map of the lands of Harold A. Varozza, et ux.", was filed with the City Council for approval as required by law and that by resolution duly adopted at a regular meeting held on the 22nd day of Aug, 1978, said Council approved said map and excepted on behalf of the public that certain parcel of land designated on said map as Parcel "X".

In witness whereof I have hereunto set my hand and affixed the Seal of the City of St. Helena this 31st day of Aug, 1978.

Lynette Denton  
CITY CLERK  
CITY OF ST. HELENA

MAP NO. 3078 CG 0613 \$ 5.00 N.  
**PARCEL MAP**  
OF THE LANDS OF  
**HAROLD A. VAROZZA, et ux.**  
OF RECORD 958 O.R. 233 N.C.R.  
CITY OF ST. HELENA  
NAPA COUNTY, CALIFORNIA

**THOMPSON & MAHORNEY**  
CIVIL ENGINEERS & LAND SURVEYORS  
ST. HELENA CALIFORNIA

APP 5-10-01

4472







10 PM 43

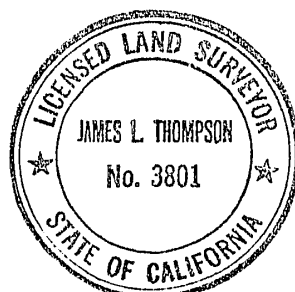
**NOTE:**

The purpose of this map is to transfer property and not to create any additional parcels of record.

**LEGEND**

- Denotes Found iron pipe monument per R-1.
- O.R. " Official Records.
- N.C.R. " Napa County Records.
- R.S. " Record of Survey.
- R-1 " Record data shown on 10 R.S. 25, map # 271, N.C.R.
- m. " Measured this survey.

\* Parcels 'A' and 'B' are to become a portion of the Remaining Lands of H.A. Varozza, et al.



**SURVEYOR'S CERTIFICATE**

This map was prepared by me or under my direction and was compiled from record data (land-based upon a field survey) in conformance with the requirements of the Subdivision Map Act at the request of...

Harold A. Varozza  
In January 1979, I hereby state that the parcel map procedures of the local agency have been complied with and that this proceeding conforms to the conditions which were required to be satisfied prior to the filing of this parcel map.  
Signed: James L. Thompson, L.S. 3801.

**CITY ENGINEER'S CERTIFICATE**

This map conforms with the requirements of the Subdivision Map Act and local ordinance.

Dated: 1-12-1979  
Signed: [Signature] City Engineer  
RCE 16331

**RECORDER'S CERTIFICATE**

Filed this 8<sup>th</sup> day of Feb., 1979  
at 4:00 p.m. in Book 10 of Parcel Maps at page 43  
at the request of Title Ins. & Tr. Co.

Eleanor E. Kimbrough  
County Recorder  
By Deputy: Kathleen Bonds

VICINITY MAP  
NOT TO SCALE

**OWNER'S CERTIFICATE**

The undersigned do hereby certify that they are the only entities having any record title in the land included within the Subdivision in Napa County, California designated on this Parcel Map entitled "Parcel Map of the Lands of Harold A. Varozza, et al.", and that they do hereby consent to the preparation and recordation of said map, and that they do hereby offer for public use that certain parcel of land designated on this map as Parcel "X".

In witness thereof they have caused these presents to be executed this 10<sup>th</sup> day of January, 1979.

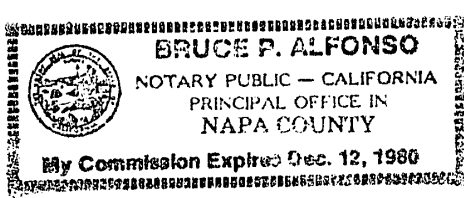
[Signatures of Harold A. Varozza, Irene T. Varozza, Jack C. Varozza, Charles J. Varozza]

State of California } S.S.  
County of Napa }

On this 10<sup>th</sup> day of January, 1979, before me, a Notary Public in and for the State of California, personally appeared Harold A. Varozza, Irene T. Varozza, Jack C. Varozza and Charles J. Varozza, known to me to be the persons whose names subscribed to the within instrument and acknowledged to me that they executed the same.

Witness my hand and official seal.

Signed: Bruce P. Alfonso



**BASIS OF BEARING**

The bearing of South 58°37' East between the monuments shown as found on the Northeast line of the lands of H.A. Varozza, et al. and shown on 10 R.S. 25, map # 271, N.C.R. (R-1).

CH1412  
\$5.00 Ad.

MAP NO. 3127  
**PARCEL MAP**

of the lands of  
HAROLD A. VAROZZA, et al.  
Of Record 1044 O.R. 535, N.C.R.

JACK VAROZZA, et al.  
Of Record 1043 O.R. 395, N.C.R.

CHARLES J. VAROZZA  
Of Record 669 O.R. 493, N.C.R.

City of St. Helena, Napa County, California.

THOMPSON & MAHORNEY  
CIVIL ENGINEERS & LAND SURVEYORS  
ST. HELENA CALIFORNIA  
A.P. 9-010-16, 17 & 21.

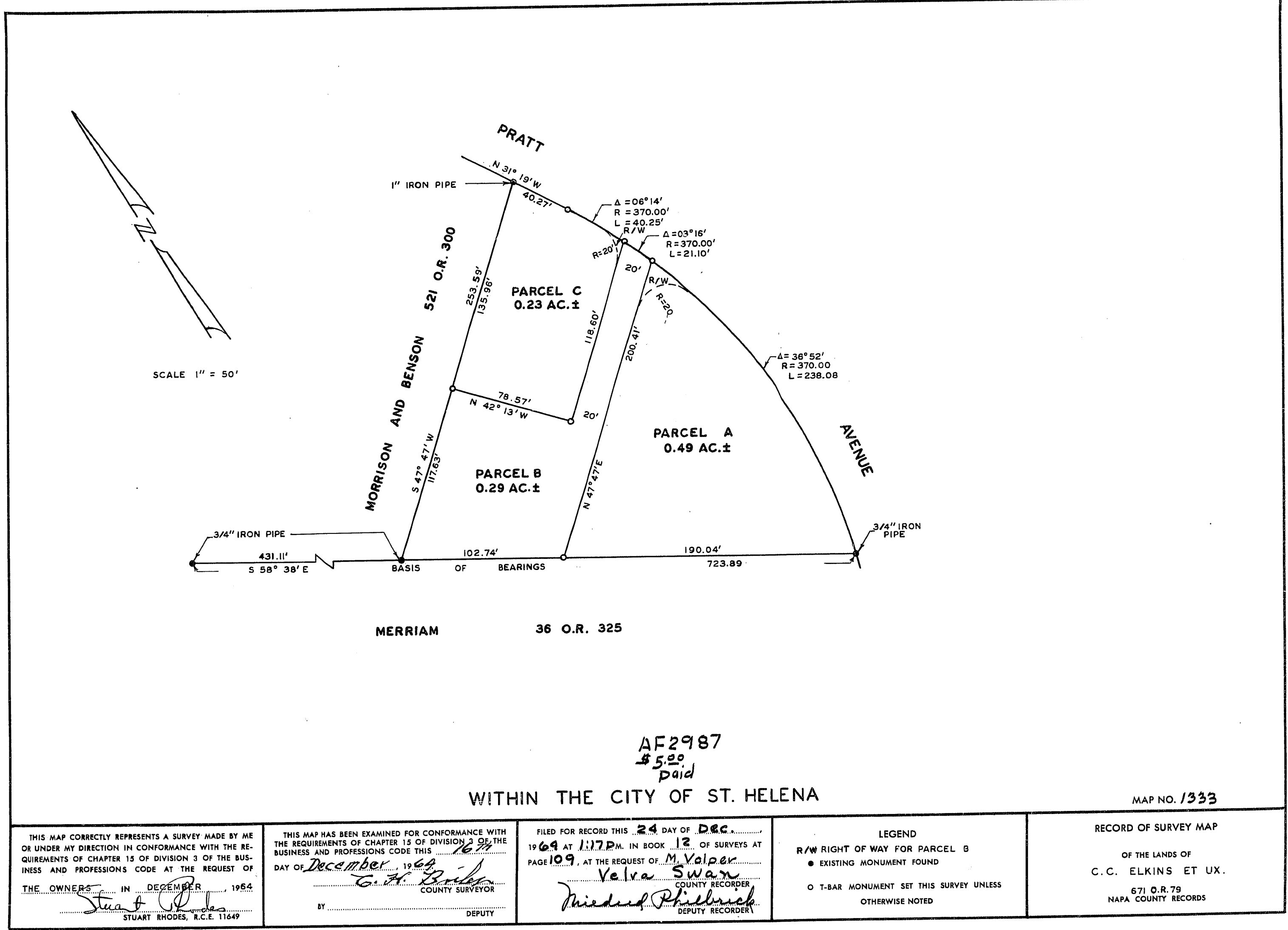
412.1







12R S 109

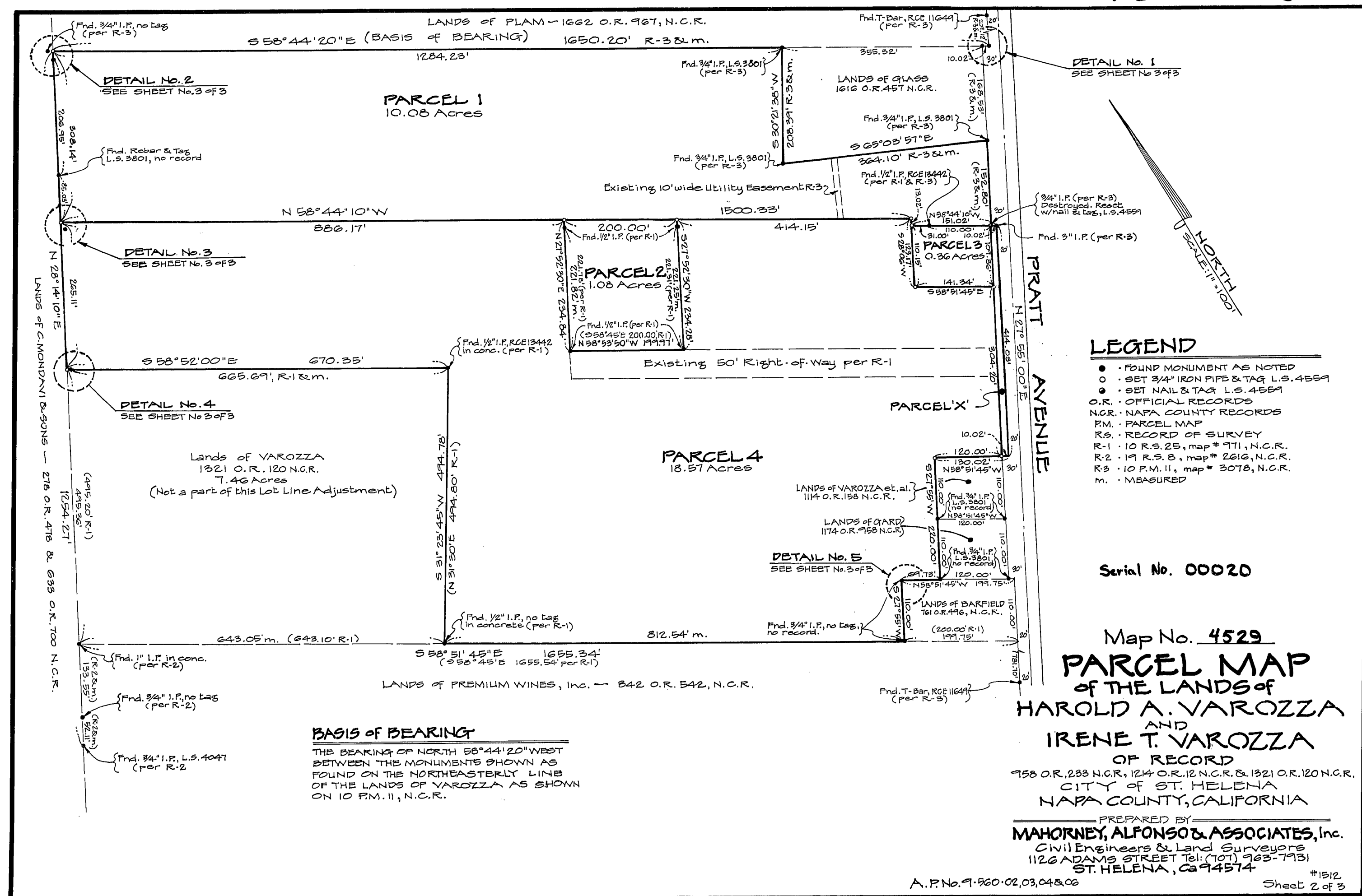








19 PM 3









23 RS 92

LEGEND

- o Denotes Set 3/4 inch iron pipe and tag L.S. 4559.
- Found monument as noted.
- O.R. Official Records
- N.C.R. Napa County Records
- R.S. Record of Survey
- R-1 Record data per 407 O.R. 452, N.C.R.
- R-2 12 R.S. 109, map number 1333, N.C.R.
- m. Measured this Survey

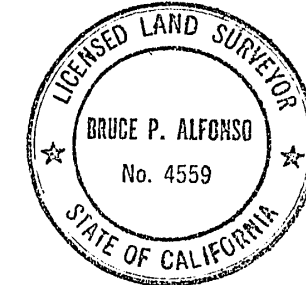
BASIS OF BEARING

The bearing of North 58° 38' West between the monuments shown as found on the southwest line of 407 O.R. 452, N.C.R.

SURVEYOR'S CERTIFICATE

This map correctly represents a survey made by me or under my direction in conformance with the requirements of the Land Surveyors Act at the request of Myron J. Morrison in May of 1984.

Bruce P. Alfonso  
Bruce P. Alfonso, L.S. 4559



COUNTY SURVEYOR'S CERTIFICATE

This map has been examined for conformance with the requirements of the Land Surveyors Act

this 13<sup>th</sup> day of November 1984.

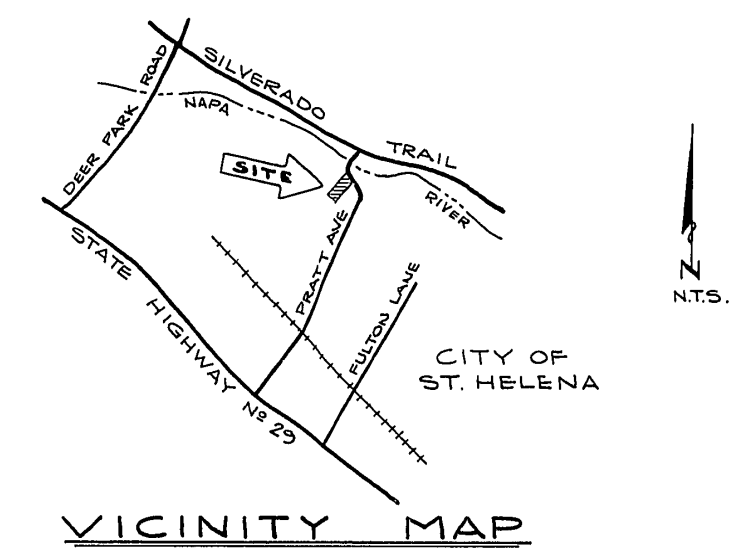
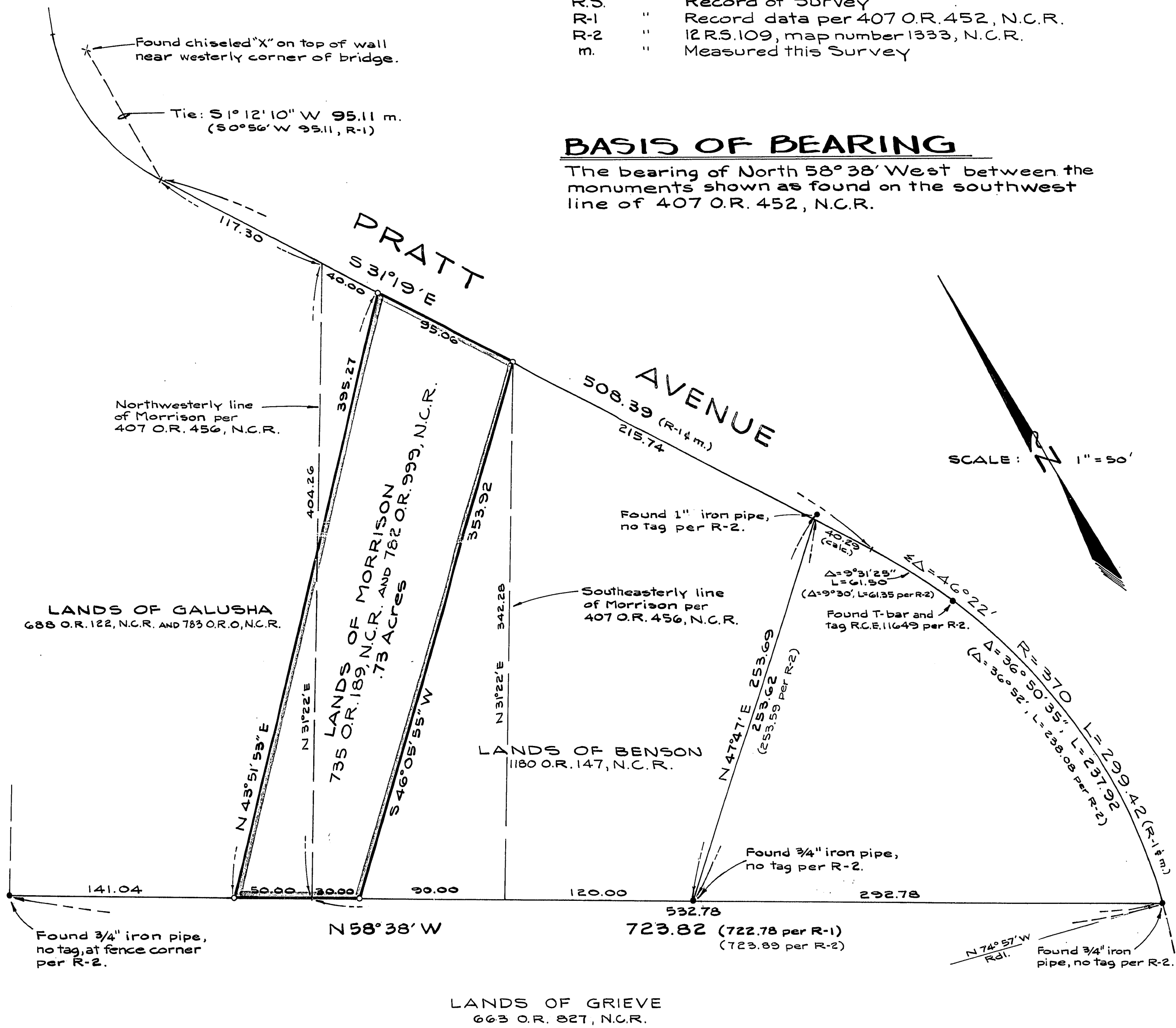
Harry D. Hamilton  
County Surveyor

RECORDER'S CERTIFICATE

Filed this 14<sup>th</sup> day of November 1984, at 9:20 a.m. in Book 23 of Surveys, at page 92, at the request of Harry Hamilton

Eleanor S. Kimbrough Sandra McPherson  
County Recorder Deputy County Recorder

Fee \$6.00 Serial No. D16779



MAP No. 3761

RECORD OF SURVEY  
OF THE LANDS OF  
MYRON J. MORRISON

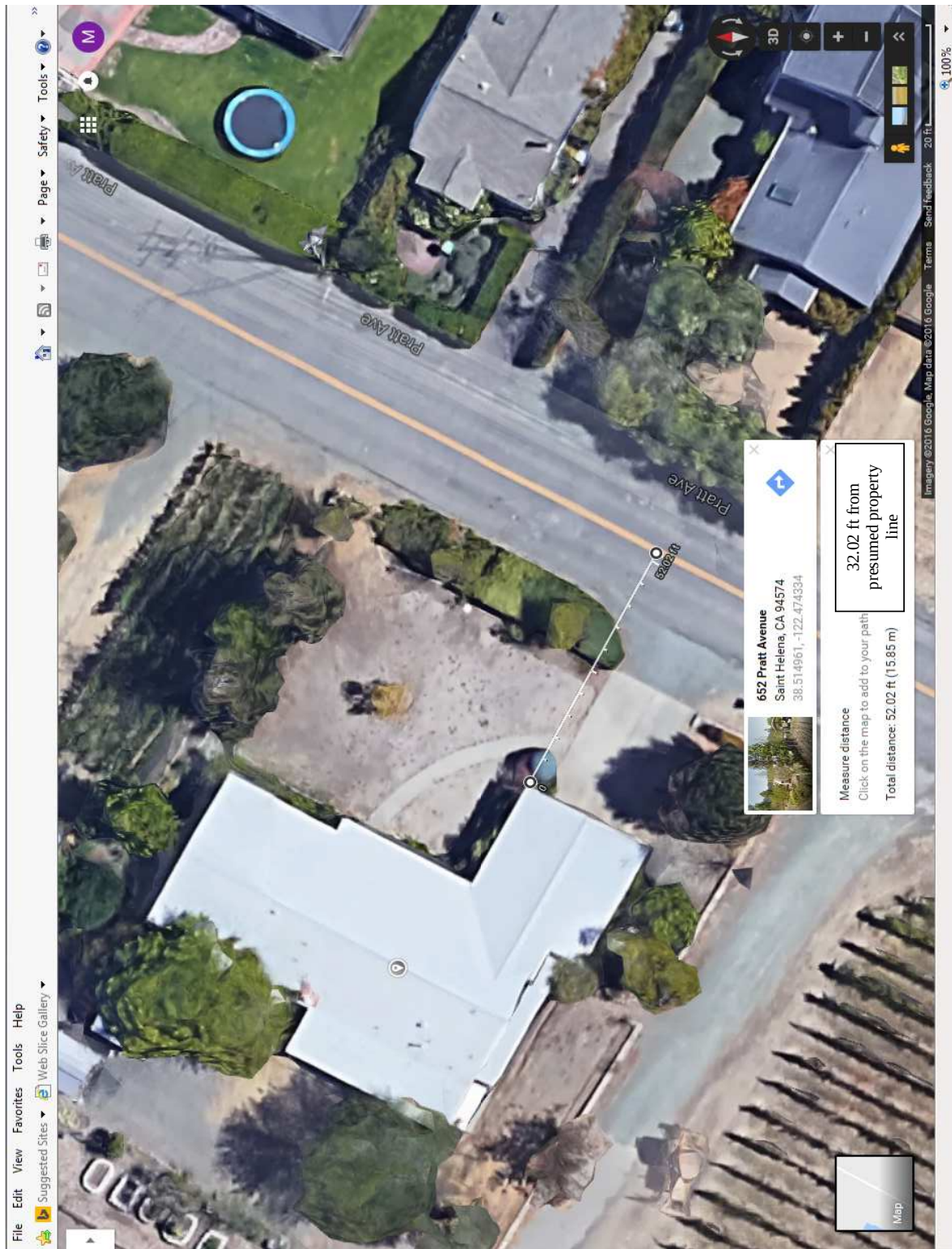
OF RECORD 735 O.R. 189, N.C.R.  
AND 782 O.R. 999, N.C.R.  
BEING A PORTION OF THE RANCHO CARNE HUMANA  
CITY OF ST. HELENA, NAPA COUNTY, CALIFORNIA

~PREPARED BY~  
MAHORNEY, ALFONSO AND ASSOCIATES  
CIVIL ENGINEERS AND LAND SURVEYORS  
ST. HELENA, CALIFORNIA  
JUNE 1984

AP# 9-020-14



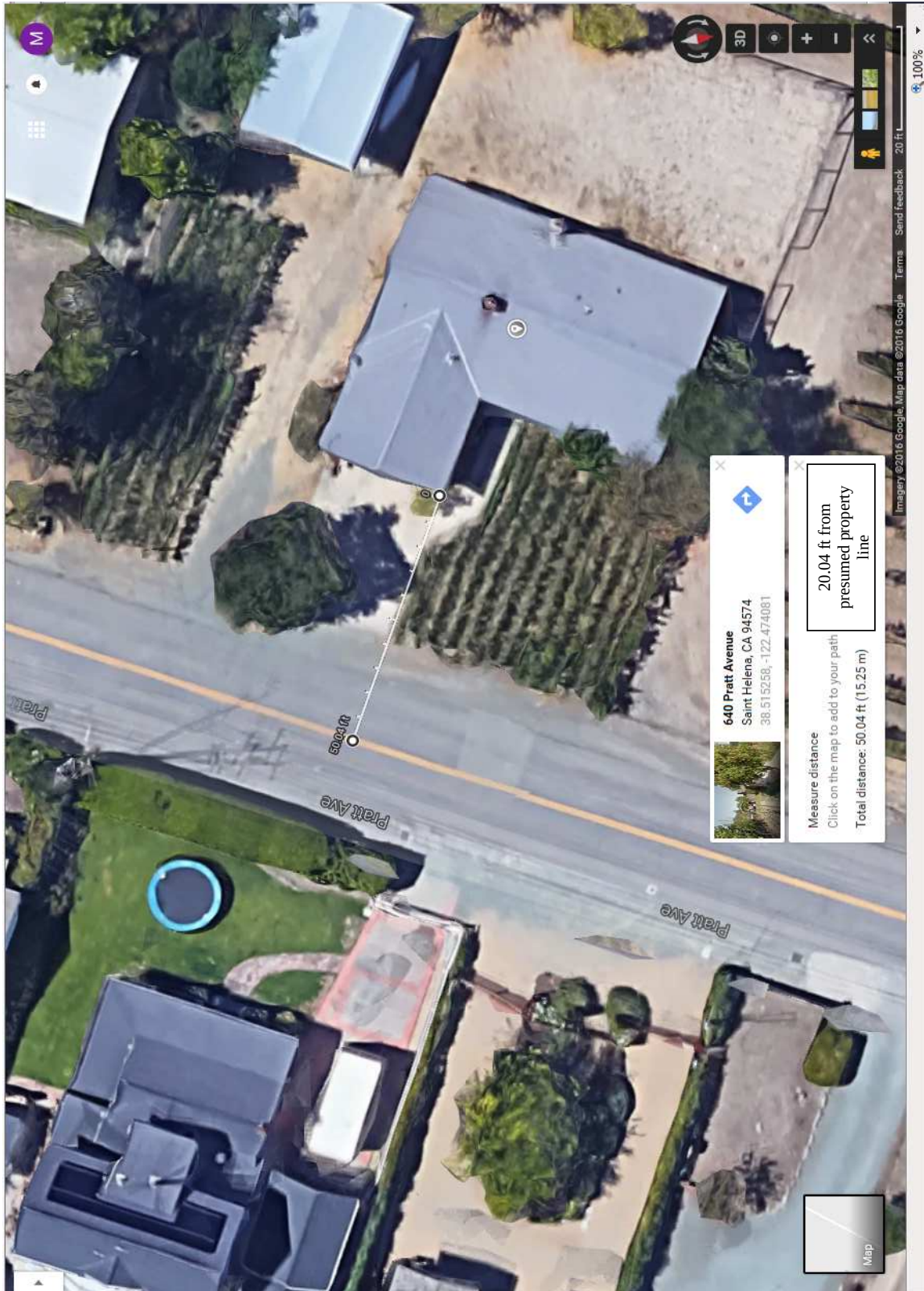




10603.002 3531008v1



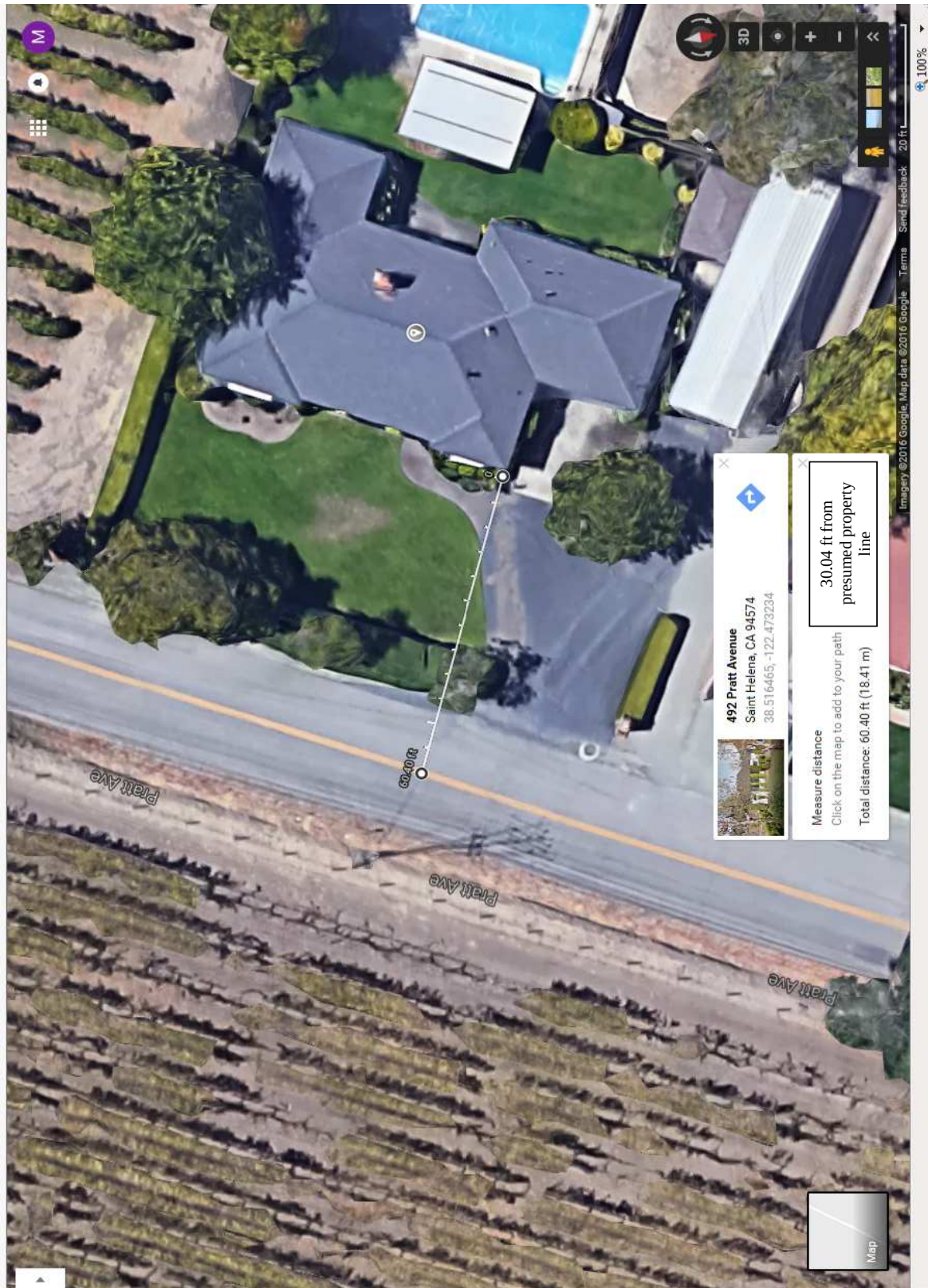




10603.002 3531008v1



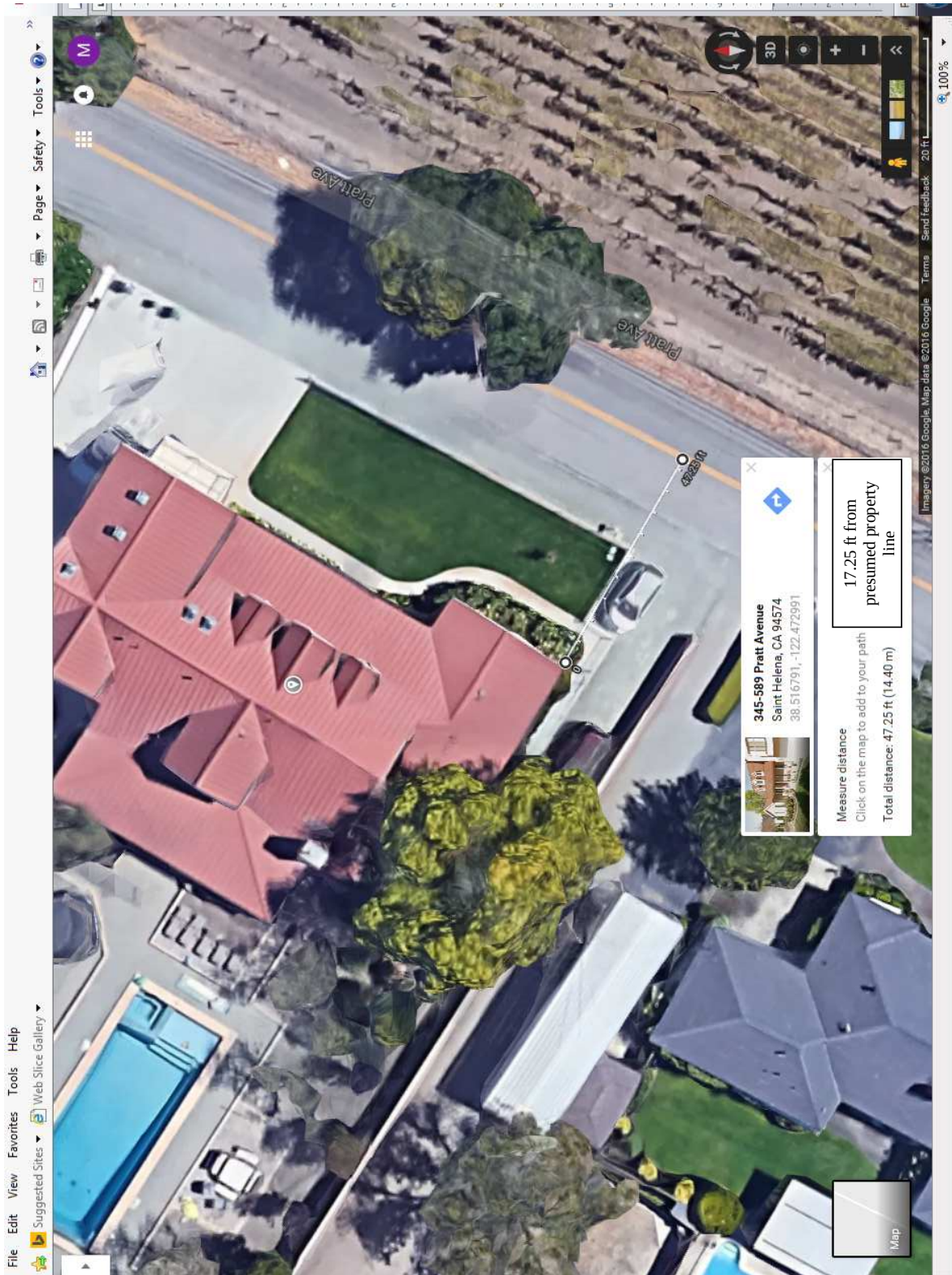




10603.002 3531008v1



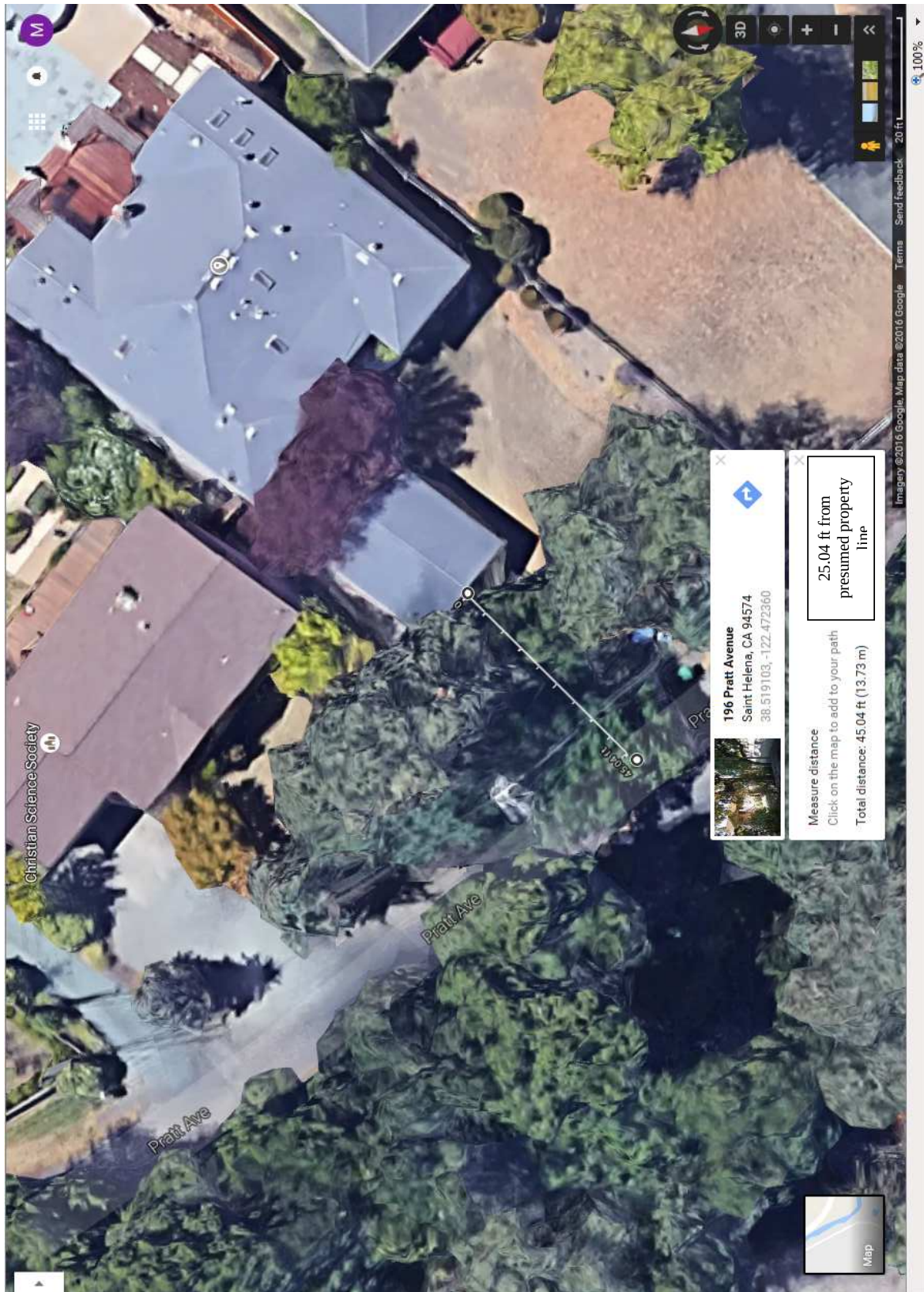




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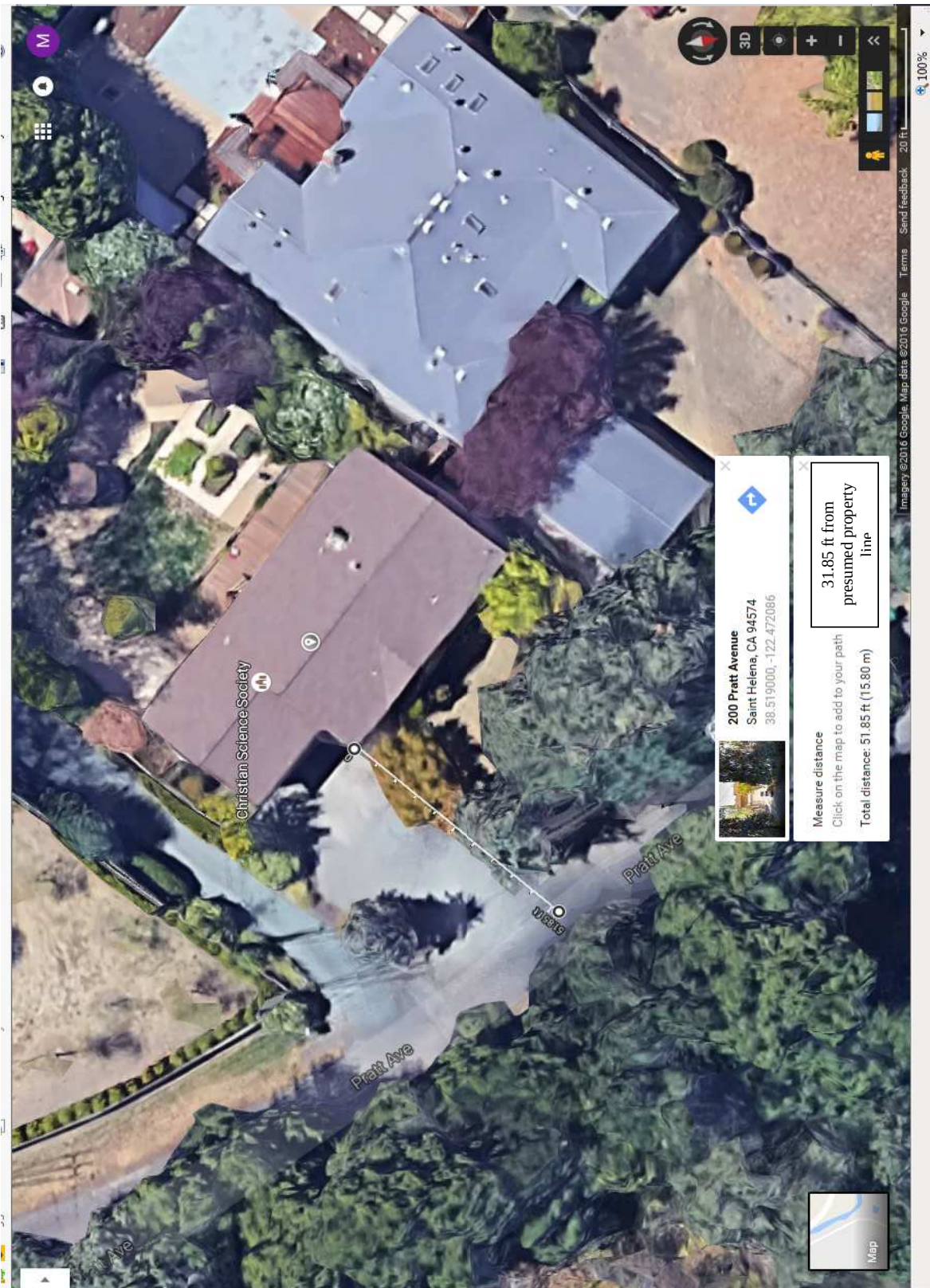




10603.002 3531008v1







10603.002 3531008v1



Attachment 6

## CRANE TRANSPORTATION GROUP

*Central Valley Office:*  
2621 E. Windrim Court  
Elk Grove, CA 95758  
(916) 647-3406 *phone*  
(916) 647-3408 *fax*

*San Francisco Bay Area Office:*  
6220 Bay View Avenue  
San Pablo, CA 94806  
(510) 236-9375 *phone*  
(510) 236-1091 *fax*

---

### MEMORANDUM

**TO:** Chuck Meibeyer, Esq., Coblenz, Patch, Duffy and Bass, LLP

**cc:** Naomi Miroglio, FAIA, Principal, Architectural Resources Group

**FROM:** Carolyn Cole, AICP, Principal

**DATE:** February 8, 2017

**RE:** Notes on Student Housing Parking Demand and Management

---

The Institute of Traffic Engineers (ITE) *Parking Generation, 4th Edition*, provides data and analysis for Land Use 550 University/College, addressing suburban and urban 4-year college sites. Data also exist for 2-year colleges, but these generally have little to no campus housing component.

the ITE data consists of 8 suburban sites and 5 urban sites; suburban and urban locations were calculated separately. The average parking supply ratio was found to be 0.4 spaces per total number of students, faculty and staff (school population) at the suburban sites, and 0.3 spaces per school population at the urban sites.

The CIA's planned 31% parking permit limitation for its Vineyard Lodge (Pratt Avenue) student housing is very close to the ITE parking supply ratio found for urban sites. However, the Vineyard Lodge site pertains only to CIA student housing, thus, may be considered to have little in common with the surveyed 4-year university sites, with their mix of classrooms, halls, offices, and student housing. For this reason, parking supply and parking management policies were examined for student housing on other campuses in California.

In a review of the online parking policies for on-campus housing, it is clear that each institution handles its parking through issuing highly restrictive permits for specified periods of time and specified parking areas. All campuses examined have an administrative division for parking management in order to manage their available student housing, and campus-wide parking supply. All encourage use of transportation alternatives to the private automobile. For example, UC Santa Barbara coordinates a vanpool and ridesharing program, discounted bus passes and an Emergency Ride Home program as part of its Transportation Alternatives Program (TAP). UC Santa Cruz maintains a parking prohibition for residential freshmen and sophomore students. First and second-year students (students with less than 90 units) that reside in on- or off-campus University housing facilities are not eligible to purchase a permit (except motorcycle permits) to

park on-campus. For students eligible to purchase permits, UC Santa Cruz issues lot-specific permits, however, its 2016-2017 TAPS bulletin (available on-line) lists eight parking lots that are sold out. The website also notes in a 2016-17 update, “due to unprecedented demand, the sale of undergraduate permits has been suspended for the 2016-17 year.” At the College of Notre Dame de Namur, in Belmont, California, first year undergraduate students are not permitted to bring cars or motorcycles to campus. At UC Davis, students living in the residence halls are not eligible to purchase campus parking permits. Residence hall students may not bring a car to campus and instead are expected to utilize public transportation and other transportation alternatives.

Parking supply was found to be an issue for all campuses examined, and strict policies are in place at all institutions to manage student housing parking demand.

The CIA’s Vineyard Lodge housing expansion project will require strict limits on the number of parking permits issued to student residents of the Vineyard Lodge housing; however, the CIA’s program of shuttle service to and from the Lodge and the Greystone facility, running every 15-minutes from 5:30 AM to the end of the student day, at 9:30 PM, is highly supportive of students not requiring personal vehicles to travel to and from campus.

*This Report is intended for presentation and use in its entirety, together with all of its supporting exhibits, schedules, and appendices. Crane Transportation Group will have no liability for any use of the Report other than in its entirety, such as providing an excerpt to a third party or quoting a portion of the Report. If you provide a portion of the Report to a third party, you agree to hold CTG harmless against any liability to such third parties based upon their use of or reliance upon a less than complete version of the Report.*





# THE CULINARY INSTITUTE OF AMERICA AT PRATT AVENUE

830 PRATT AVENUE  
ST. HELENA, CALIFORNIA

USE PERMIT AND DESIGN REVIEW SUBMITTAL



Architectural  
Resources Group

Pier 9, The Embarcadero, Suite 107  
San Francisco, California 94111  
415 421 1680

argsf.com



RESPONSE TO  
COMMENTS 9/2/2016

| NO. | DESCRIPTION | DATE |
|-----|-------------|------|
|-----|-------------|------|

REVISIONS

## THE CULINARY INSTITUTE OF AMERICA

AT PRATT AVENUE

830 PRATT AVENUE  
ST. HELENA, CALIFORNIA

SHEET TITLE

TITLE SHEET

CEQA VISUAL ANALYSIS

JULY 2016

PROJ NO.  
11208.03

DRAWN  
ZY

CHECKED  
NM

DRAWING NO.

T1.0  
SHEET OF

### PROJECT TEAM

#### CLIENT

CULINARY INSTITUTE OF AMERICA  
2555 MAIN STREET  
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#### CIVIL ENGINEER

SUMMIT ENGINEERING, INC.  
463 AVIATION BLVD, STE 200  
SANTA ROSA, CA 95403

### INDEX OF DRAWINGS

#### TITLE SHEETS

T1.0 TITLE SHEET

#### CIVIL

UP-1 EXISTING CONDITIONS & DEMOLITION PLAN  
UP-2 OVERALL SITE PLAN  
UP-3 PRELIMINARY GRADING & DRAINAGE PLAN  
UP-4 PRELIMINARY GRADING & DRAINAGE PLAN  
UP-5 PROPOSED UTILITY PLAN  
UP-6 FIRE TRUCK ACCESS

#### LANDSCAPE

L-1 EXISTING VEGETATION PLAN  
L-2 LANDSCAPE PLAN  
L-3 IRRIGATION PLAN

#### ARCHITECTURAL

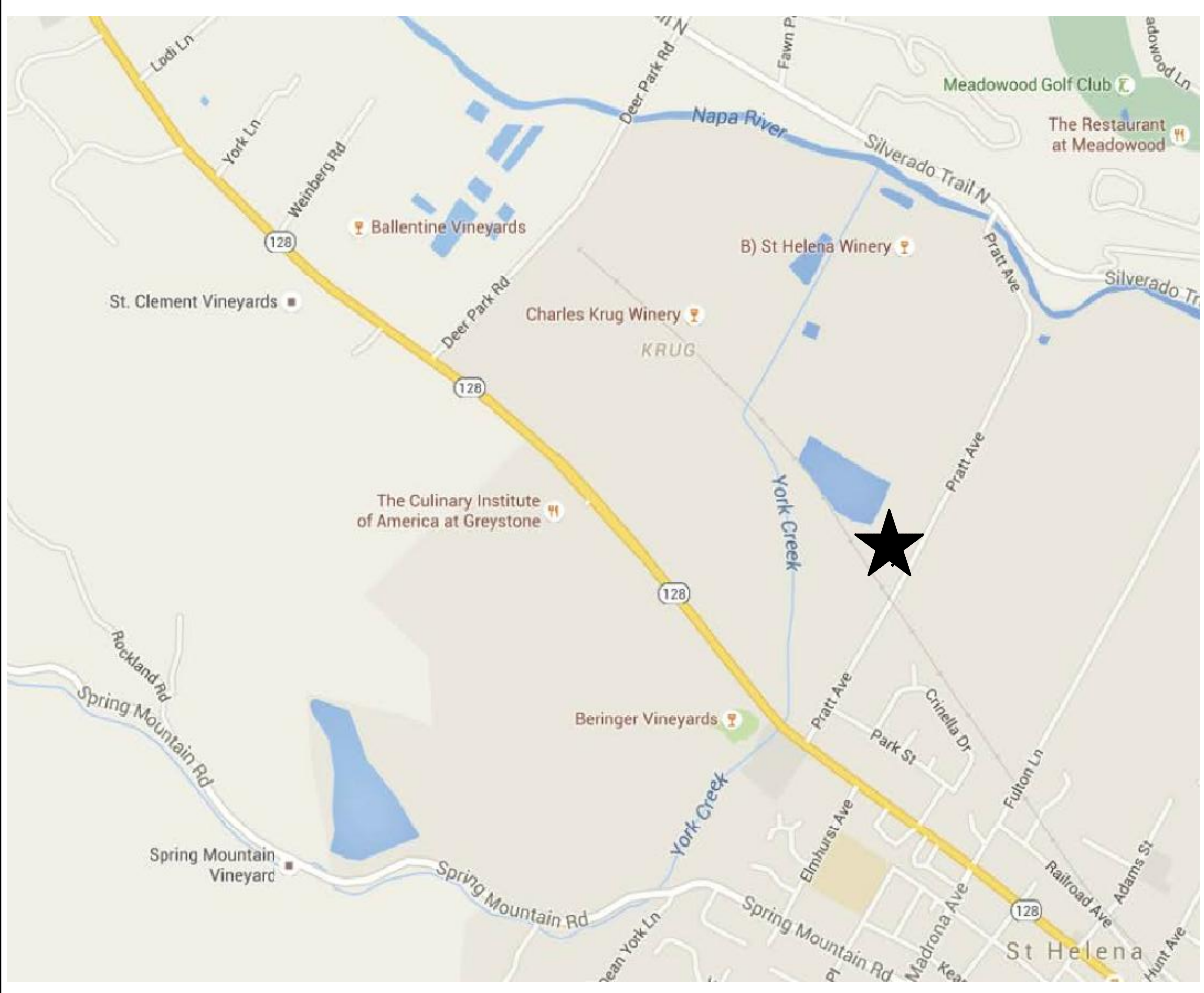
A001 SITE PLAN

A101 BUILDING A FLOOR PLANS  
A102 BUILDING A FLOOR PLANS & ROOF PLAN  
A103 BUILDING A ELEVATIONS & SECTION  
A104 BUILDING B FLOOR PLANS & ROOF PLAN  
A105 BUILDING B ELEVATIONS & SECTION  
A106 BUILDING C FLOOR PLANS & ROOF PLAN  
A107 BUILDING C ELEVATIONS & SECTION  
A108 CONCEPTUAL PERSPECTIVE ILLUSTRATION

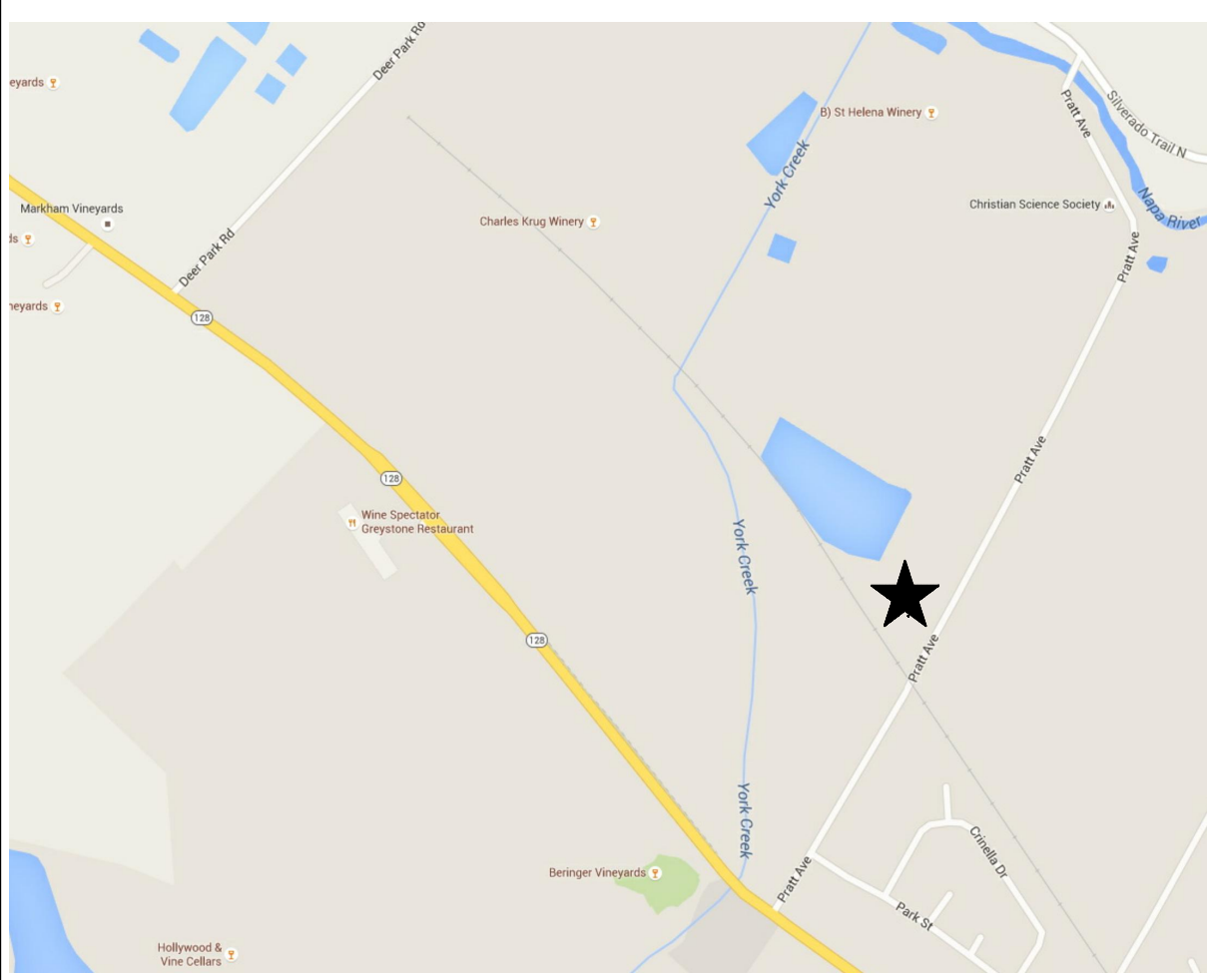
#### SITE CONTEXT PHOTOS

SP-1 SITE PHOTOS  
SP-2 SITE PHOTOS

### PROJECT LOCATION

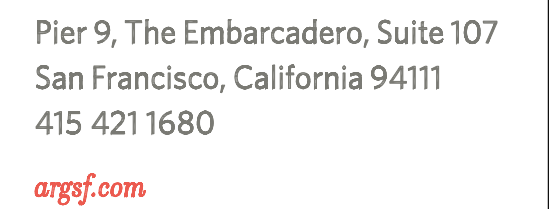


### VICINITY MAP





**APPLICANT:**  
**CULINARY INSTITUTE OF AMERICA**  
**830 PRATT AVENUE**  
**ST. HELENA, CA 94574**



1 UP RESUBMITTAL 9/2/16

THE CULINARY  
INSTITUTE OF  
AMERICA

SHEET TITLE

**EXISTING CONDITIONS  
& DEMOLITION PLAN**

6-21-2016

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UP1



24"x36" OR 22"x34" SHEET SIZE. IF SHEET IS SMALLER, THEN DRAWING HAS BEEN REDUCED.





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THE CULINARY  
INSTITUTE OF  
AMERICA

AT PRATT AVENUE  
830 PRATT AVENUE  
ST. HELENA, CALIFORNIA

SHEET TITLE

OVERALL SITE PLAN

PERMIT AND DESIGN REVIEW  
SUBMITTAL

6-21-2016

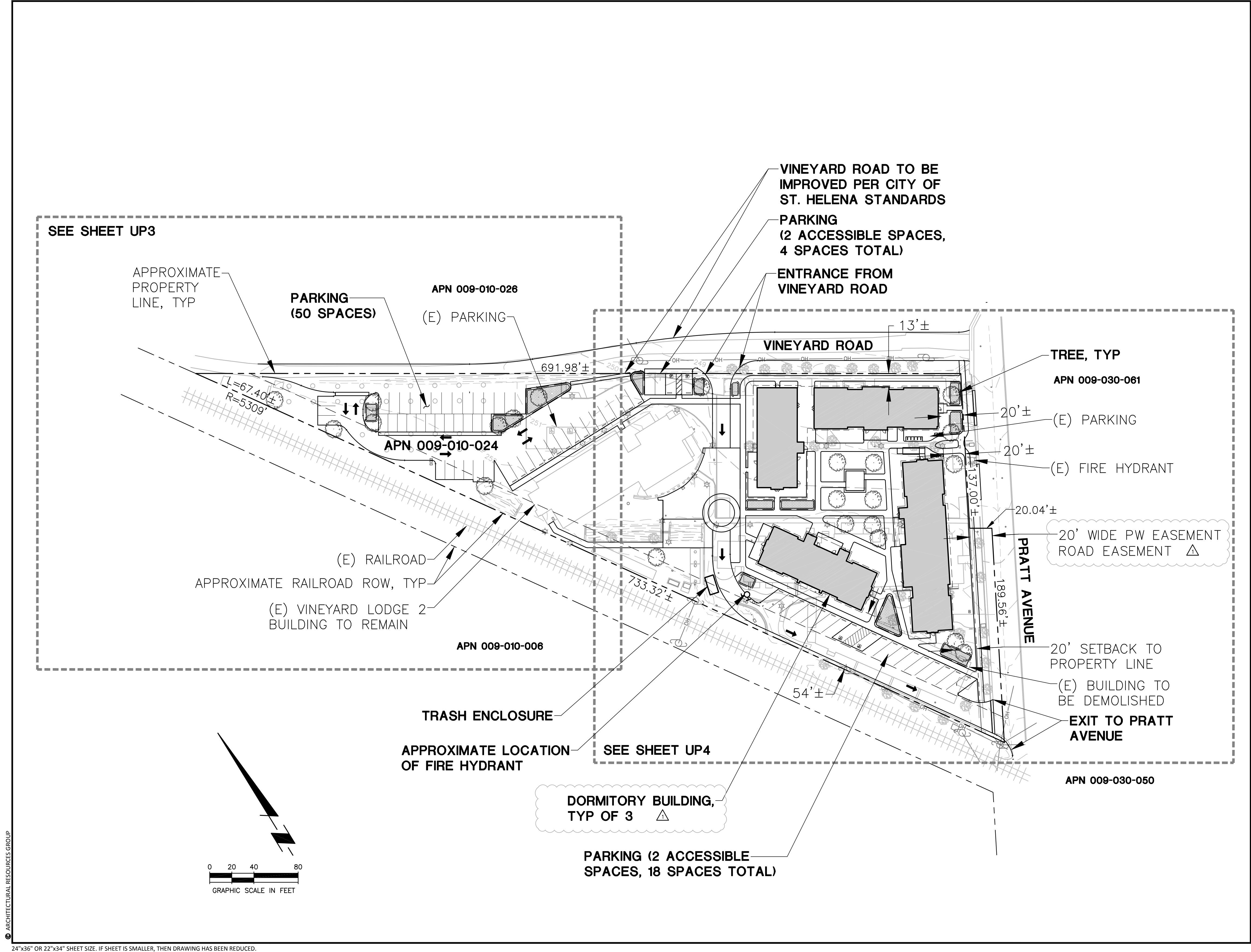
PROJ NO.  
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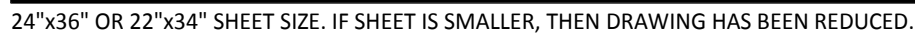
DRAWING NO.

UP2



24"x36" OR 22"x34" SHEET SIZE. IF SHEET IS SMALLER, THEN DRAWING HAS BEEN REDUCED.

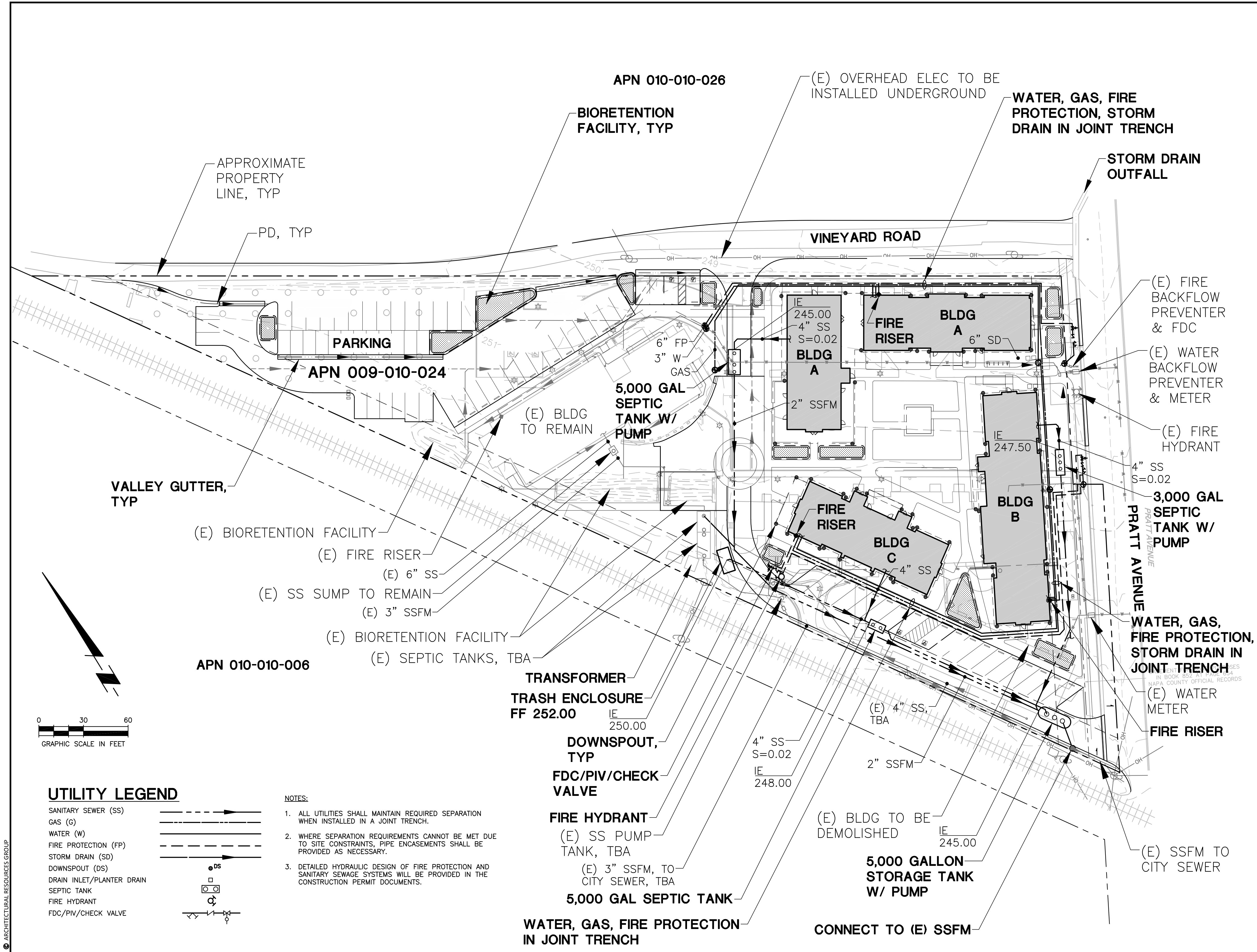




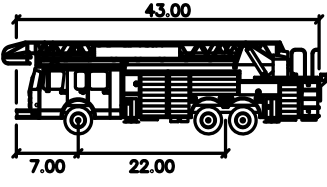
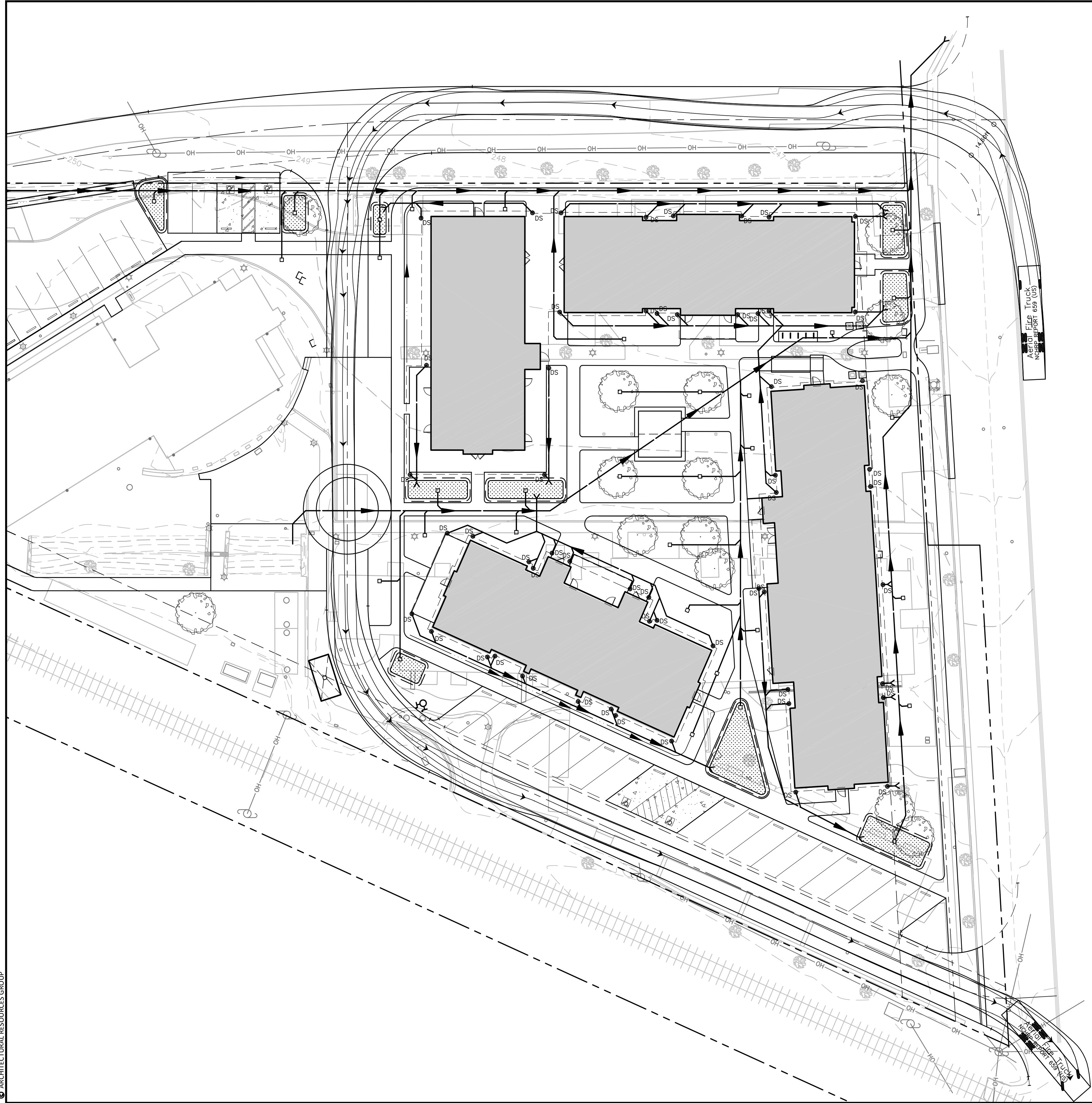












Aerial Fire Truck  
Width : 8.50  
Truck : 8.50  
Lock to Lock Time : 8.0  
Steering Angle : 33.3

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24"x36" OR 22"x34" SHEET SIZE. IF SHEET IS SMALLER, THEN DRAWING HAS BEEN REDUCED.



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## THE CULINARY INSTITUTE OF AMERICA

AT PRATT AVENUE  
830 PRATT AVENUE  
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SHEET TITLE  
**FIRE TRUCK ACCESS**

PERMIT AND DESIGN REVIEW  
SUBMITTAL

6-21-2016

PROJ NO.  
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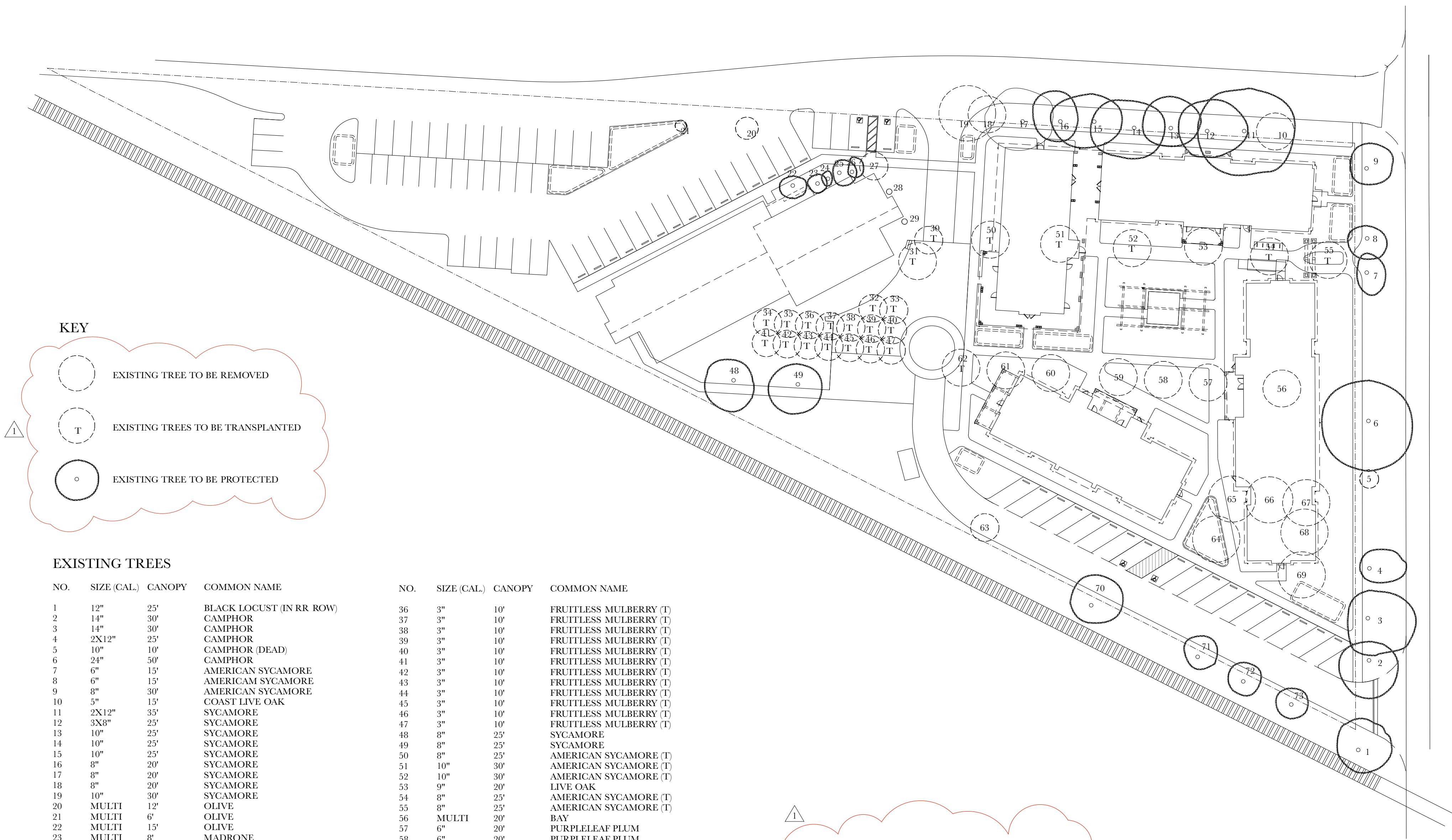
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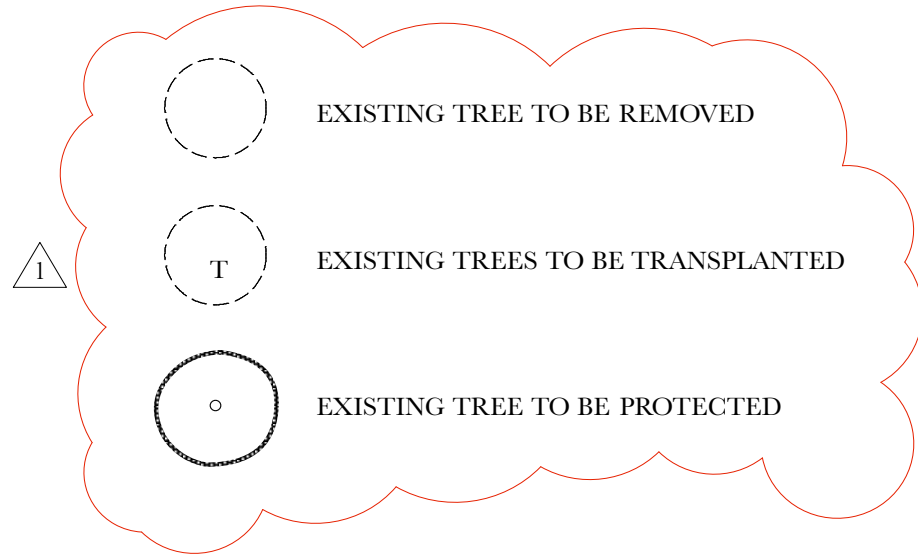
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UP6





KEY



EXISTING TREES

| NO. | SIZE (CAL.) | CANOPY | COMMON NAME              | NO. | SIZE (CAL.) | CANOPY | COMMON NAME            |
|-----|-------------|--------|--------------------------|-----|-------------|--------|------------------------|
| 1   | 12"         | 25'    | BLACK LOCUST (IN RR ROW) | 36  | 3"          | 10'    | FRUITLESS MULBERRY (T) |
| 2   | 14"         | 30'    | CAMPHOR                  | 37  | 3"          | 10'    | FRUITLESS MULBERRY (T) |
| 3   | 14"         | 30'    | CAMPHOR                  | 38  | 3"          | 10'    | FRUITLESS MULBERRY (T) |
| 4   | 2X12"       | 25'    | CAMPHOR                  | 39  | 3"          | 10'    | FRUITLESS MULBERRY (T) |
| 5   | 10"         | 10'    | CAMPHOR (DEAD)           | 40  | 3"          | 10'    | FRUITLESS MULBERRY (T) |
| 6   | 24"         | 50'    | CAMPHOR                  | 41  | 3"          | 10'    | FRUITLESS MULBERRY (T) |
| 7   | 6"          | 15'    | AMERICAN SYCAMORE        | 42  | 3"          | 10'    | FRUITLESS MULBERRY (T) |
| 8   | 6"          | 15'    | AMERICAM SYCAMORE        | 43  | 3"          | 10'    | FRUITLESS MULBERRY (T) |
| 9   | 8"          | 30'    | AMERICAN SYCAMORE        | 44  | 3"          | 10'    | FRUITLESS MULBERRY (T) |
| 10  | 5"          | 15'    | COAST LIVE OAK           | 45  | 3"          | 10'    | FRUITLESS MULBERRY (T) |
| 11  | 2X12"       | 35'    | SYCAMORE                 | 46  | 3"          | 10'    | FRUITLESS MULBERRY (T) |
| 12  | 3X3"        | 25'    | SYCAMORE                 | 47  | 3"          | 10'    | FRUITLESS MULBERRY (T) |
| 13  | 10"         | 25'    | SYCAMORE                 | 48  | 8"          | 25'    | SYCAMORE               |
| 14  | 10"         | 25'    | SYCAMORE                 | 49  | 8"          | 25'    | SYCAMORE               |
| 15  | 10"         | 25'    | SYCAMORE                 | 50  | 8"          | 25'    | AMERICAN SYCAMORE (T)  |
| 16  | 8"          | 20'    | SYCAMORE                 | 51  | 10"         | 30'    | AMERICAN SYCAMORE (T)  |
| 17  | 8"          | 20'    | SYCAMORE                 | 52  | 10"         | 30'    | AMERICAN SYCAMORE (T)  |
| 18  | 8"          | 20'    | SYCAMORE                 | 53  | 9"          | 20'    | LIVE OAK               |
| 19  | 10"         | 30'    | SYCAMORE                 | 54  | 8"          | 25'    | AMERICAN SYCAMORE (T)  |
| 20  | MULTI       | 12'    | OLIVE                    | 55  | 8"          | 25'    | AMERICAN SYCAMORE (T)  |
| 21  | MULTI       | 6'     | OLIVE                    | 56  | MULTI       | 20'    | BAY                    |
| 22  | MULTI       | 15'    | OLIVE                    | 57  | 6"          | 20'    | PURPLELEAF PLUM        |
| 23  | MULTI       | 8'     | MADRONE                  | 58  | 6"          | 20'    | PURPLELEAF PLUM        |
| 24  | MULTI       | 8'     | MADRONE                  | 59  | 6"          | 20'    | PURPLELEAF PLUM        |
| 25  | MULTI       | 8'     | MADRONE                  | 60  | 6"          | 20'    | PURPLELEAF PLUM        |
| 26  | MULTI       | 8'     | MADRONE                  | 61  | 6"          | 20'    | PURPLELEAF PLUM        |
| 27  | MULTI       | 15'    | MADRONE                  | 62  | 4"          | 10'    | FRUIT (T)              |
| 28  | 6"          | 20'    | ITALIAN CYPRESS          | 63  | MULTI       | 15'    | BAY                    |
| 29  | 6"          | 20'    | ITALIAN CYPRESS          | 64  | 12"         | 25'    | HONEY LOCUST           |
| 30  | MULTI       | 15'    | OLIVE (T)                | 65  | 12"         | 25'    | HONEY LOCUST           |
| 31  | MULTI       | 20'    | OLIVE (T)                | 66  | 12"         | 25'    | HONEY LOCUST           |
| 32  | 3"          | 10'    | FRUITLESS MULBERRY (T)   | 67  | 12"         | 25'    | HONEY LOCUST           |
| 33  | 3"          | 10'    | FRUITLESS MULBERRY (T)   | 68  | 12"         | 25'    | HONEY LOCUST           |
| 34  | 3"          | 10'    | FRUITLESS MULBERRY (T)   | 69  | 12"         | 25'    | HONEY LOCUST           |
| 35  | 3"          | 10'    | FRUITLESS MULBERRY (T)   | 70  | 14"         | 30'    | EUCALYPTUS (IN RR ROW) |
|     |             |        |                          | 71  | 9"          | 20'    | CATALPA (IN RR ROW)    |
|     |             |        |                          | 72  | 10"         | 20'    | CATALPA (IN RR ROW)    |
|     |             |        |                          | 73  | 9"          | 20'    | CATALPA (IN RR ROW)    |

(T) DENOTES TREES TO BE TRANSPLANTED

NOTE: REFER TO ARBORIST'S TREE PROTECTION GUIDELINES AND SPECIFICATIONS



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RESPONSE TO CITY COMMENTS 9.06.2016

NO. DESCRIPTION DATE

REVISIONS

## THE CULINARY INSTITUTE OF AMERICA

AT PRATT AVENUE

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### TREE PROTECTION/ REMOVAL PLAN

PERMIT AND DESIGN REVIEW  
SUBMITTAL

6-21-2016

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KEY

- 

EXISTING TREE (RETAINED)  
SEE EXISTING VEGETATION PLAN
- 

PROPOSED TREE
- 

PROPOSED SHRUBS
- 

WOOD MULCH IN ALL  
PLANTED AREAS

PLANT LIST

| KEY | BOTANICAL NAME                  | COMMON NAME             | QTY | SIZE AND REMARKS      |
|-----|---------------------------------|-------------------------|-----|-----------------------|
| A   | ACER PALMATUM 'SANGO-KAKU'      | CORAL BARK MAPLE        | 8   | 24" BOX               |
| B   | BERBERIS THUNBERGI              | BARBERRY                | 31  | 5 GAL                 |
| C   | CALLISTEMON SP.                 | BOTTLEBRUSH TREE        | 1   | 15 GAL                |
| D   | CISTUS SALVIFOLIUS 'PROSTRATUS' | DWARF WHITE ROCKROSE    | 90  | 1 GAL                 |
| E   | EPILOBIUM 'ETTERI'              | CALIFORNIA FUCHSIA      | 40  | 1 GAL                 |
| F   | FEIJOA SELLOWIANA               | PINEAPPLE GUAVA         | 16  | 15 GAL                |
| H   | FRAGARIA CHILOENSIS             | BEACH STRAWBERRY        | 95  | 4" POTS, IN BIOSWALES |
| J   | HYDRANGEA QUERCIFOLIA           | OAK LEAF HYDRANGEA      | 15  | 5 GAL                 |
| K   | LAURUS NOBILIS                  | SWEET BAY               | 4   | 15 GAL                |
| L   | MORUS ALBA                      | FRUITLESS MULBERRY TREE | 6   | TRANSPLANTED ON SITE  |
| M   | NASSELLA TENUISSIMA             | MEXICAN FEATHER GRASS   | 80  | 1 GAL                 |
| N   | OLEA 'LITTLE OLLIE'             | OLIVE SHRUB             | 9   | 5 GAL                 |
| P   | OLEA 'SWAN HILL'                | FRUITLESS OLIVE TREE    | 5   | 24" BOX               |
| Q   | PISTACEA SINENSIS               | CHINESE PISTACHE        | 15  | 24" BOX               |
| R   | PUNICUM GRANATA 'NANA'          | DWARF POMEGRANATE       | 3   | 5 GAL                 |
| S   | PUNICUM SP.                     | POMEGRANATE             | 4   | 15 GAL                |
| T   | RHAMNUS CALIFORNICA 'EVE CASE'  | COFFEEBERRY             | 12  | 5 GAL, IN BIOSWALES   |
| U   | ROSA 'ICEBERG'                  | ICEBERG ROSE            | 23  | 5 GAL                 |
| V   | ROSMARINUS 'TUSCAN BLUE'        | TUSCAN BLUE ROSEMARY    | 10  | 5 GAL                 |
| W   | SYMPHORICARPUS ALBUS            | SNOWBERRY               | 14  | 5 GAL, IN BIOSWALES   |
| X   | TEUCRIUM CHAMAEDRY'S            | GERMANDER               | 60  | 1 GAL                 |

PLANTING NOTES:

1. ALL PLANTS AND LAWN TO BE IRRIGATED WITH AN AUTOMATED IRRIGATION SYSTEM.
2. ALL PROPOSED PLANT MATERIALS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION AND WILL BE REJECTED IF NOT IN CONFORMANCE WITH INDUSTRY STANDARDS. PLANTS SHALL BE PRUNED PRIOR TO INSPECTION.
3. THE PLANT COUNT SHALL GOVERN IF ANY DISCREPANCY IS FOUND BETWEEN THE PLANT COUNT AND THE PLANTING PLAN(S).
3. PLANTING AREAS SHALL BE CLEARED OF ALL WEEDS AND DEBRIS PRIOR TO SOIL PREPARATION. IN THE CASE OF PERNICIOUS PERENNIAL WEEDS, A SYSTEMATIC HERBICIDE SHALL BE APPLIED PRIOR TO CLEARING. IF PARTICULARLY DIFFICULT WEEDS SUCH AS WILD ONION ARE ENCOUNTERED, THE LANDSCAPE ARCHITECT AND OWNERS SHALL BE ADVISED PRIOR TO PROCEEDING.
4. ALL PLANTING OPERATIONS SHALL BE PERFORMED BY PERSONNEL FAMILIAR WITH THIS TYPE OF WORK AND UNDER THE SUPERVISION OF A QUALIFIED PLANTING FOREMAN.
5. THE LANDSCAPE CONTRACTOR SHALL SUPPLY AND CULTIVATE 2 INCHES OF NITROLIZED FIR BARK AND 1 INCH OF 3/16" MINUS LAVA STONE INTO THE TOP 6 INCHES OF ALL PLANTING AREAS. ROTOTILL IN LIFTS AS REQUIRED, OR HAND WORK NEAR ROOT SYSTEMS OF EXISTING TREES.
6. ALL PLANT MATERIAL SHALL BE DELIVERED TO THE JOBSITE FOR INSPECTION. PRIOR TO PLANTING, THE CONTRACTOR SHALL CONFIRM LOCATIONS OF ALL PLANTS WITH THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL GIVE 3 DAYS NOTICE OF PLANT DELIVERY AND PLACEMENT.
7. ON COMPLETION OF PLANTING AND IRRIGATION INSTALLATION, ALL PLANTED AREAS SHALL RECEIVE A UNIFORM LAYER OF 2 INCHES OF FIR BARK WOOD MULCH. CONTRACTOR SHALL PROVIDE A SAMPLE OF MULCH PRIOR TO ORDERING.
8. THE LANDSCAPE CONTRACTOR SHALL MAKE NO CHANGES TO THE PLANT LAYOUT WITHOUT CONSENT OF THE LANDSCAPE ARCHITECT.
9. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL NEW PLANTINGS FOR A 6 MONTH PERIOD OR UNTIL THERE IS EVIDENCE OF POSITIVE GROWTH. THE GUARANTEE PERIOD SHALL BEGIN AFTER FINAL INSPECTION AND APPROVAL.
10. ANY PLANTS THAT DIE OR ARE DAMAGED SHALL BE REPLACED IMMEDIATELY.

HYDROZONES

| NUMBER | DESRPTION            | WATER USE |
|--------|----------------------|-----------|
| H1     | LOW DENSITY PLANTING | LOW/DRIP  |
| H2     | LOW DENSITY PLANTING | LOW/DRIP  |
| H3     | LOW DENSITY PLANTING | LOW/DRIP  |
| H4     | LOW DENSITY PLANTING | LOW/DRIP  |
| H5     | LOW DENSITY PLANTING | LOW/DRIP  |
| H6     | LOW DENSITY PLANTING | LOW/DRIP  |
| H7     | LOW DENSITY PLANTING | LOW/DRIP  |
| H8     | LOW DENSITY PLANTING | LOW/DRIP  |
| H9     | SOD LAWN             | HIGH/OS   |
| H10    | SOD LAWN             | HIGH/OS   |
| H11    | LOW DENSITY PLANTING | LOW/DRIP  |
| H12    | LOW DENSITY PLANTING | LOW/DRIP  |
| H13    | LOW DENSITY PLANTING | LOW/DRIP  |
| H14    | LOW DENSITY PLANTING | LOW/DRIP  |
| H15    | LOW DENSITY PLANTING | LOW/DRIP  |
| H16    | LOW DENSITY PLANTING | LOW/DRIP  |
| H17    | LOW DENSITY PLANTING | LOW/DRIP  |
| H18    | LOW DENSITY PLANTING | LOW/DRIP  |
| H19    | NEW TREES            | LOW/DRIP  |
| H20    | NEW TREES            | LOW/DRIP  |
| H21    | LOW DENSITY PLANTING | LOW/DRIP  |
| H22    | LOW DENSITY PLANTING | LOW/DRIP  |
| H23    | LOW DENSITY PLANTING | LOW/DRIP  |
| H24    | NEW TREES            | LOW/DRIP  |

HYDROZONE NUMBERS CORRESPOND WITH VALVE NUMBERS ON IRRIGATION PLAN.

REFER TO MWELO CALCULATIONS.



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REVISIONS

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AT PRATT AVENUE

830 PRATT AVENUE  
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SHEET TITLE

LANDSCAPE  
PLAN

PERMIT AND DESIGN REVIEW  
SUBMITTAL

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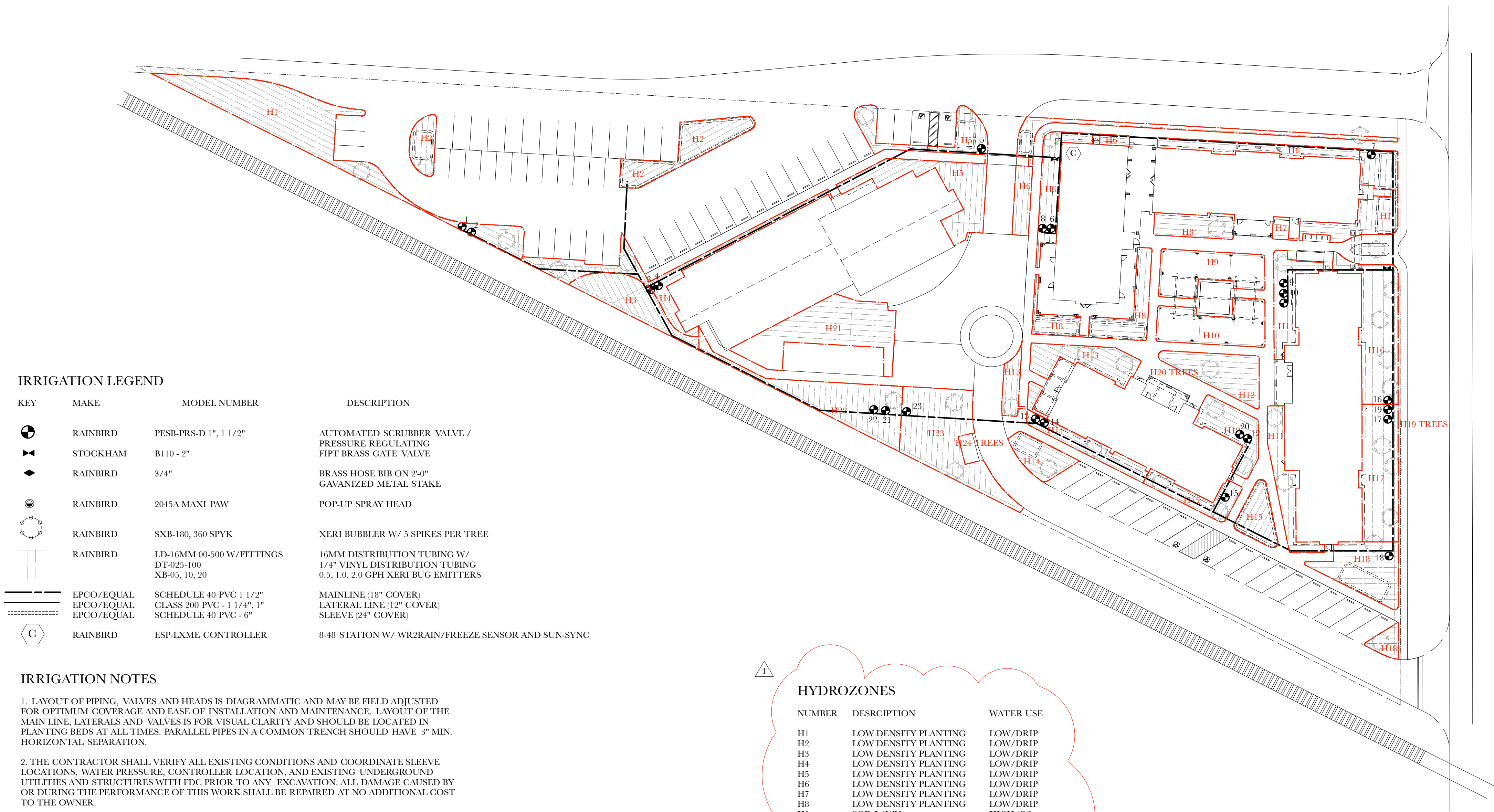
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IRRIGATION LEGEND

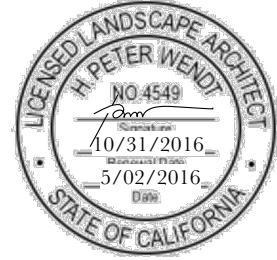
| KEY | MAKE     | MODEL NUMBER                                       | DESCRIPTION                                                                                    |
|-----|----------|----------------------------------------------------|------------------------------------------------------------------------------------------------|
|     | RAINBIRD | PESB-PRS-D 1", 1 1/2"                              | AUTOMATED SCRUBBER VALVE / PRESSURE REGULATING FIPT BRASS GATE VALVE                           |
|     | STOCKHAM | B110 - 2"                                          | BRASS HOSE BIB ON 2'-0" GAVANIZED METAL STAKE                                                  |
|     | RAINBIRD | 3/4"                                               | POP-UP SPRAY HEAD                                                                              |
|     | RAINBIRD | 2045A MAXI PAW                                     | XERI BUBBLER W/ 5 SPIKES PER TREE                                                              |
|     | RAINBIRD | SXB-180, 360 SPYK                                  | 16MM DISTRIBUTION TUBING W/ 1/4" VINYL DISTRIBUTION TUBING 0.5, 1.0, 2.0 GPH XERI BUG EMITTERS |
|     | RAINBIRD | LD-16MM 00-500 W/FITTINGS DT-025-100 XB-05, 10, 20 | MAINLINE (18" COVER) LATERAL LINE (12" COVER) SLEEVE (24" COVER)                               |
|     | RAINBIRD | ESP-LXME CONTROLLER                                | 8-48 STATION W/ WR2RAIN/FREEZE SENSOR AND SUN-SYNC                                             |

IRRIGATION NOTES

- LAYOUT OF PIPING, VALVES AND HEADS IS DIAGRAMMATIC AND MAY BE FIELD ADJUSTED FOR OPTIMUM COVERAGE AND EASE OF INSTALLATION AND MAINTENANCE. LAYOUT OF THE MAIN LINE, LATERALS AND VALVES IS FOR VISUAL CLARITY AND SHOULD BE LOCATED IN PLANTING BEDS AT ALL TIMES. PARALLEL PIPES IN A COMMON TRENCH SHOULD HAVE 3" MIN. HORIZONTAL SEPARATION.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND COORDINATE SLEEVE LOCATIONS, WATER PRESSURE, CONTROLLER LOCATION, AND EXISTING UNDERGROUND UTILITIES AND STRUCTURES WITH FDC PRIOR TO ANY EXCAVATION. ALL DAMAGE CAUSED BY OR DURING THE PERFORMANCE OF THIS WORK SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER.
- PROVIDE 18" OF COVER OVER MAIN LINES AND 12" OF COVER OVER LATERALS. ALL TRENCHING WITHIN OR NEAR THE DRIPLINES OF EXISTING TREES SHALL BE APPROVED BY THE ARBORIST PRIOR TO PROCEEDING.
- ALL BACKFILL MATERIAL SHALL BE CLEAN AND FREE OF ROCKS AND DEBRIS AND SHALL BE COMPACTED TO ORIGINAL SOIL DENSITY. SLEEVES SHALL EXTEND 12" BEYOND PAVING EDGES.
- THE CONTRACTOR SHALL MAINTAIN AN ACCURATE AS-BUILD DRAWING OF THE INSTALLED SYSTEM AND PROVIDE IT TO THE OWNER UPON COMPLETION OF THE WORK.

STATEMENT OF COMPLIANCE:

I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE DESIGN PLAN.



| HYDROZONES |                      |           |
|------------|----------------------|-----------|
| NUMBER     | DESCRIPTION          | WATER USE |
| H1         | LOW DENSITY PLANTING | LOW/DRIP  |
| H2         | LOW DENSITY PLANTING | LOW/DRIP  |
| H3         | LOW DENSITY PLANTING | LOW/DRIP  |
| H4         | LOW DENSITY PLANTING | LOW/DRIP  |
| H5         | LOW DENSITY PLANTING | LOW/DRIP  |
| H6         | LOW DENSITY PLANTING | LOW/DRIP  |
| H7         | LOW DENSITY PLANTING | LOW/DRIP  |
| H8         | LOW DENSITY PLANTING | LOW/DRIP  |
| H9         | SOD LAWN             | HIGH/OS   |
| H10        | SOD LAWN             | HIGH/OS   |
| H11        | LOW DENSITY PLANTING | LOW/DRIP  |
| H12        | LOW DENSITY PLANTING | LOW/DRIP  |
| H13        | LOW DENSITY PLANTING | LOW/DRIP  |
| H14        | LOW DENSITY PLANTING | LOW/DRIP  |
| H15        | LOW DENSITY PLANTING | LOW/DRIP  |
| H16        | LOW DENSITY PLANTING | LOW/DRIP  |
| H17        | LOW DENSITY PLANTING | LOW/DRIP  |
| H18        | LOW DENSITY PLANTING | LOW/DRIP  |
| H19        | NEW TREES            | LOW/DRIP  |
| H20        | NEW TREES            | LOW/DRIP  |
| H21        | LOW DENSITY PLANTING | LOW/DRIP  |
| H22        | LOW DENSITY PLANTING | LOW/DRIP  |
| H23        | LOW DENSITY PLANTING | LOW/DRIP  |
| H24        | NEW TREES            | LOW/DRIP  |

HYDROZONE NUMBERS CORRESPOND WITH VALVE NUMBERS ON IRRIGATION PLAN.

REFER TO MWELO CALCULATIONS.



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RESPONSE TO CITY COMMENTS 9.06.2016

NO. DESCRIPTION DATE

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SHEET TITLE

IRRIGATION PLAN

PERMIT AND DESIGN REVIEW SUBMITTAL

6-21-2016

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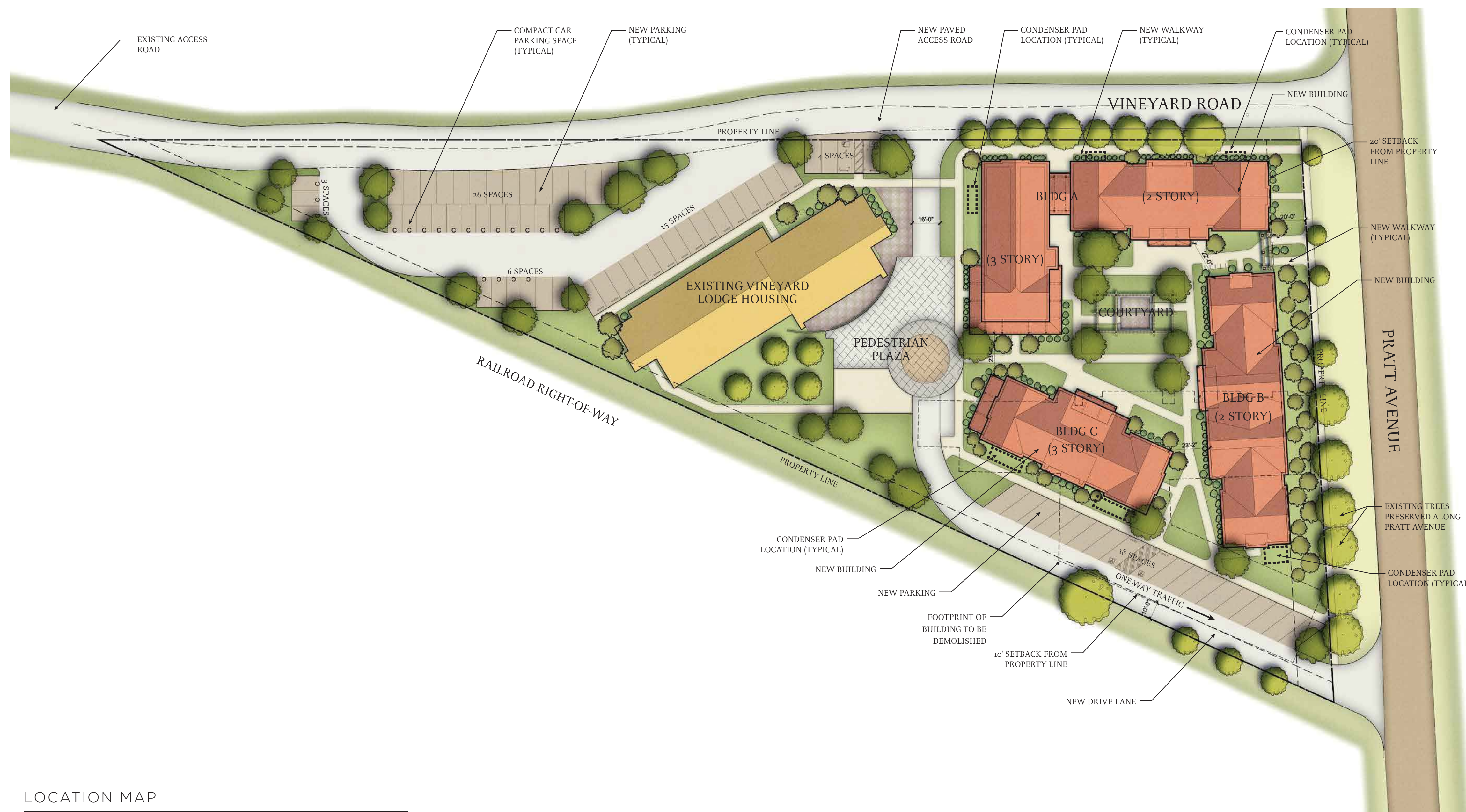
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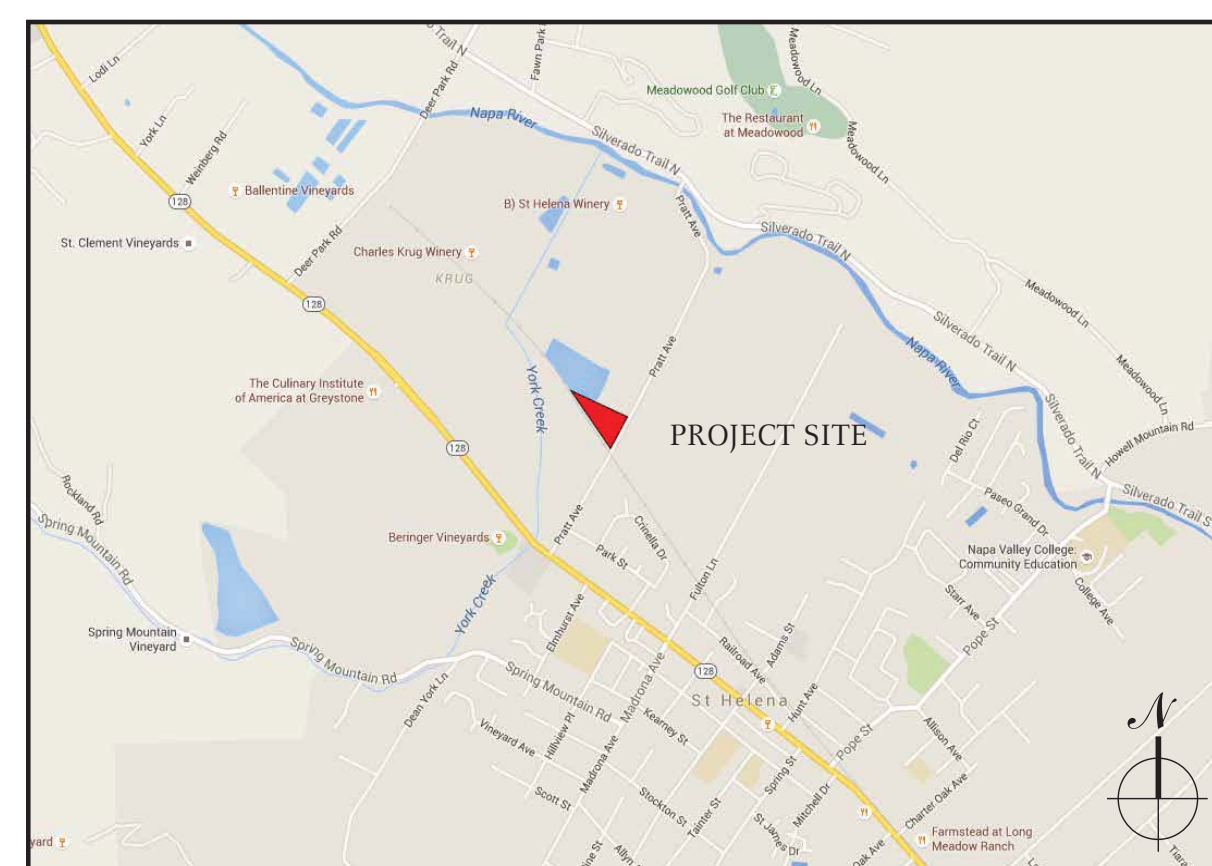
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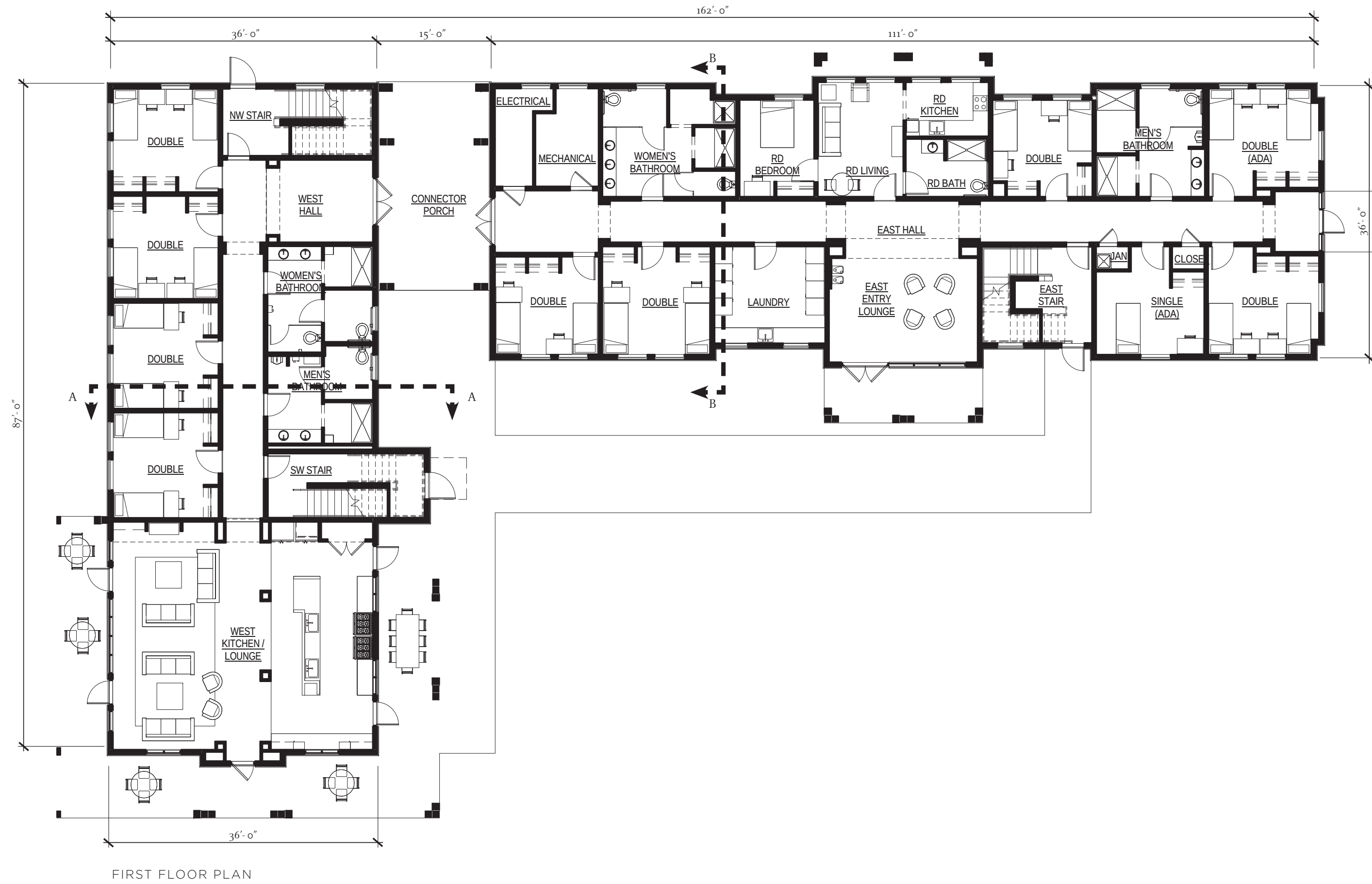
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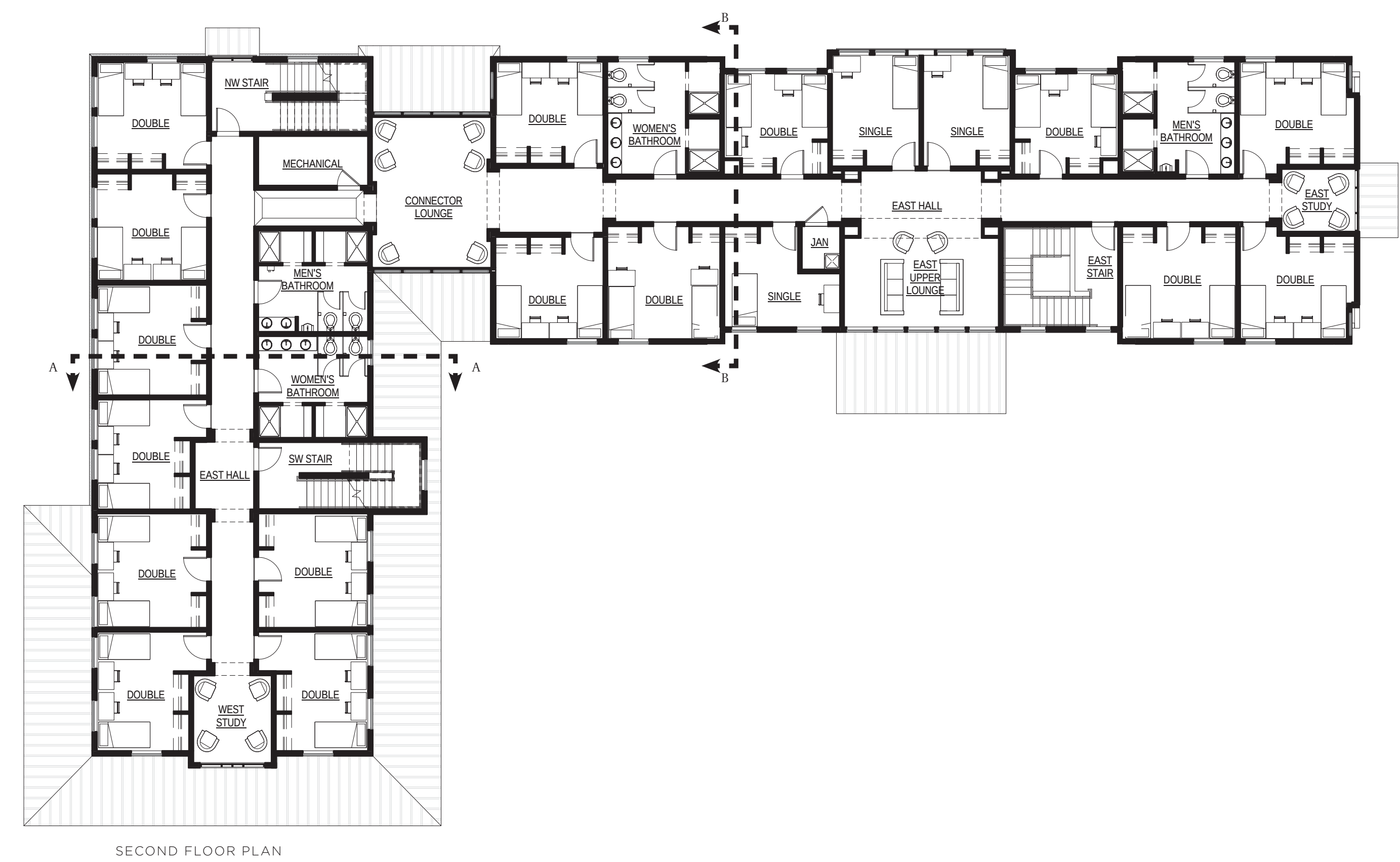
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| BED COUNT       |           |
|-----------------|-----------|
| First Floor:    | 21 Beds   |
| Single Room     | 3 Beds    |
| Double Room     | 18 Beds   |
| Second Floor:   | 37 Beds   |
| Single Room     | 5 Beds    |
| Double Room     | 32 Beds   |
| Third Floor:    | 12 Beds   |
| Single Room     | 0 Beds    |
| Double Room     | 12 Beds   |
| Total Beds:     | 70 Beds   |
| Total Gross SF: | 17,885 sf |



SCALE: 3/32"=1'-0"



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### BUILDING A FLOOR PLANS

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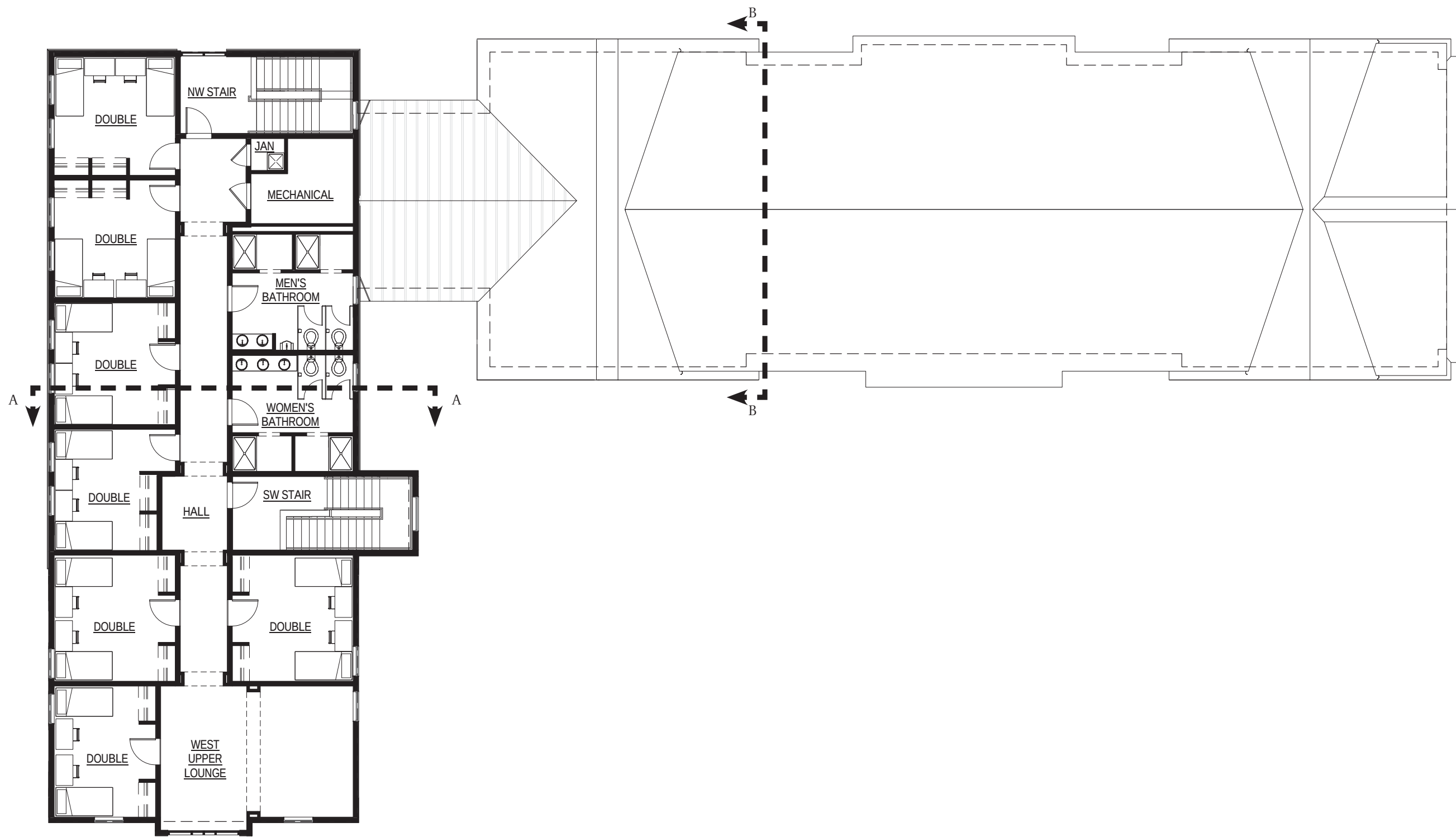
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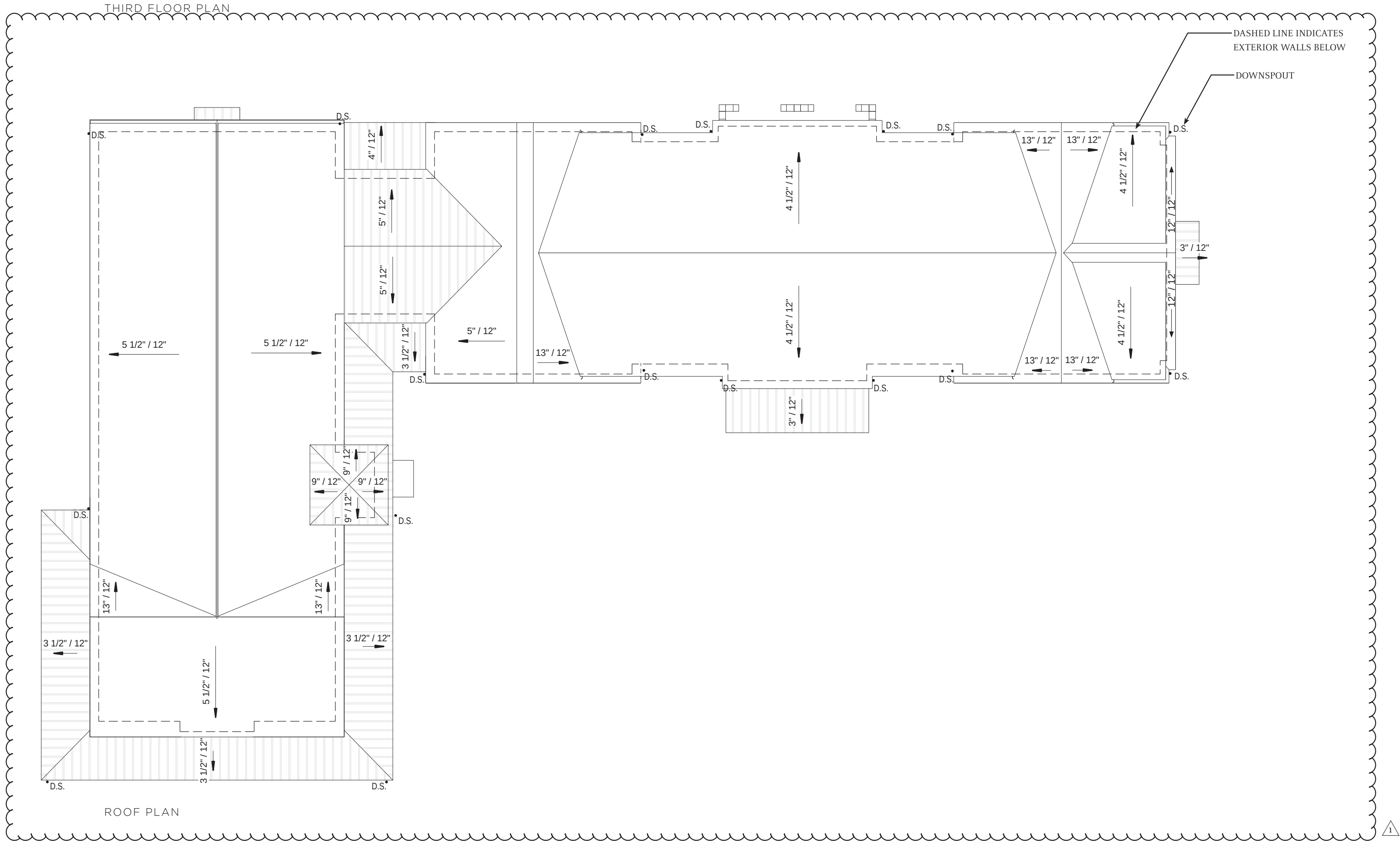
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# A101





| BED COUNT       |           |
|-----------------|-----------|
| First Floor:    | 21 Beds   |
| Single Room     | 3 Beds    |
| Double Room     | 18 Beds   |
| Second Floor:   | 37 Beds   |
| Single Room     | 5 Beds    |
| Double Room     | 32 Beds   |
| Third Floor:    | 12 Beds   |
| Single Room     | 0 Beds    |
| Double Room     | 12 Beds   |
| Total Beds:     | 70 Beds   |
| Total Gross SF: | 17,885 sf |



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ROOF PLAN

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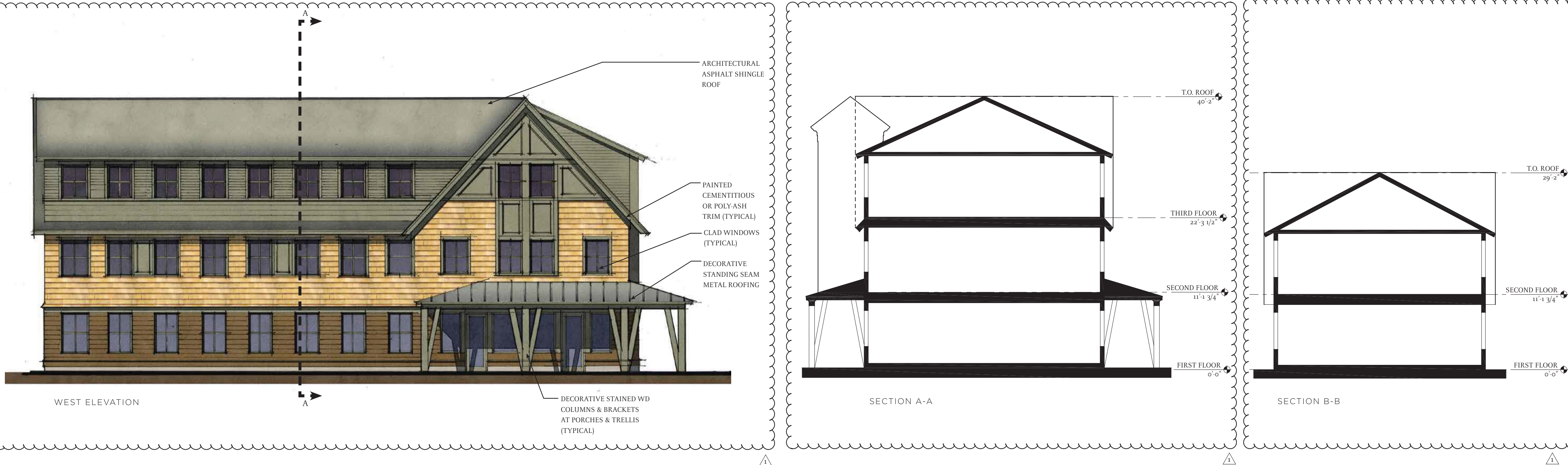
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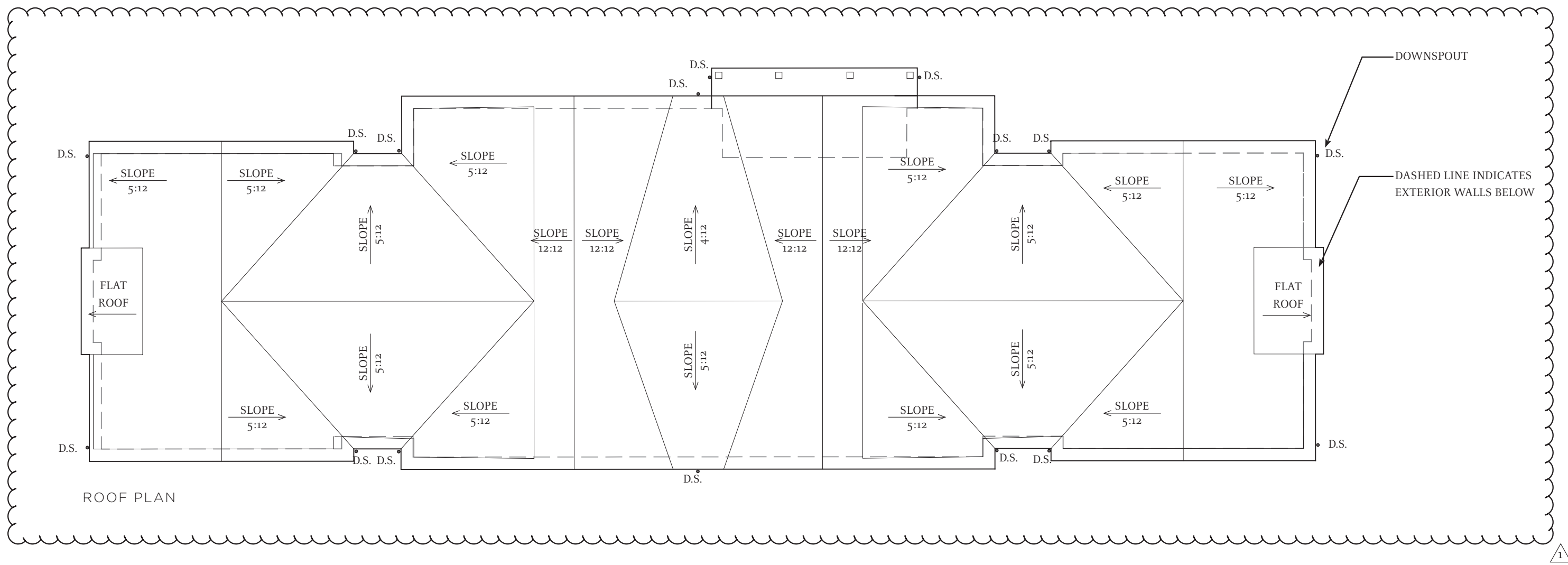
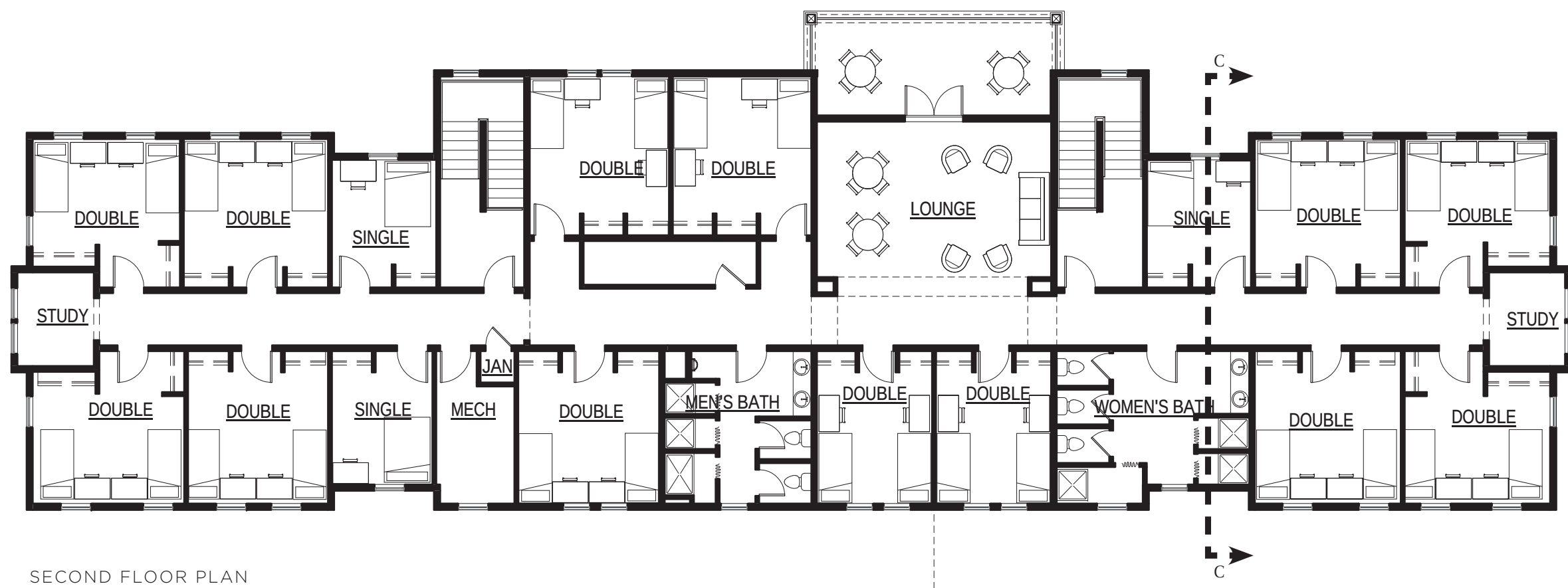
# A103







| BED COUNT       |           |
|-----------------|-----------|
| First Floor:    | 23 Beds   |
| Single Room     | 1 Beds    |
| Double Room     | 22 Beds   |
| Second Floor:   | 29 Beds   |
| Single Room     | 3 Beds    |
| Double Room     | 26 Beds   |
| Total Beds:     | 52 Beds   |
| Total Gross SF: | 11,380 sf |



SCALE: 3/32"=1'-0"



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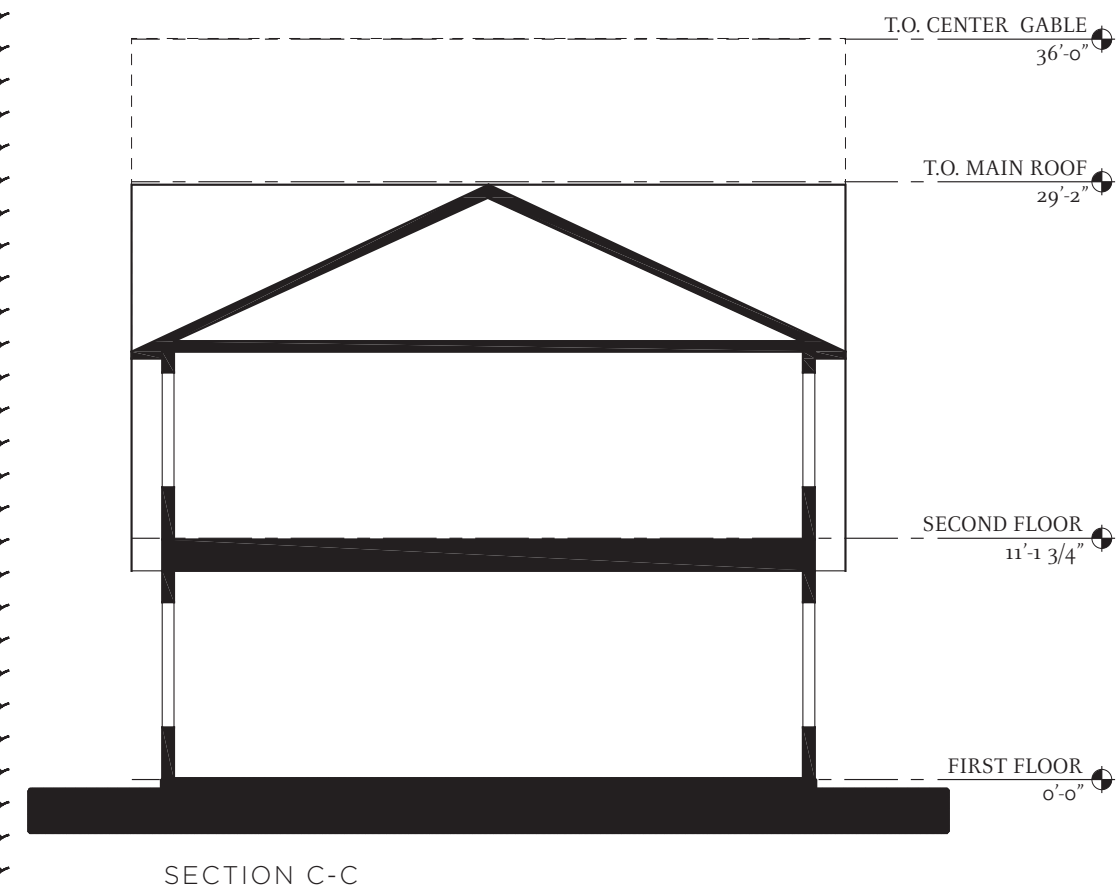
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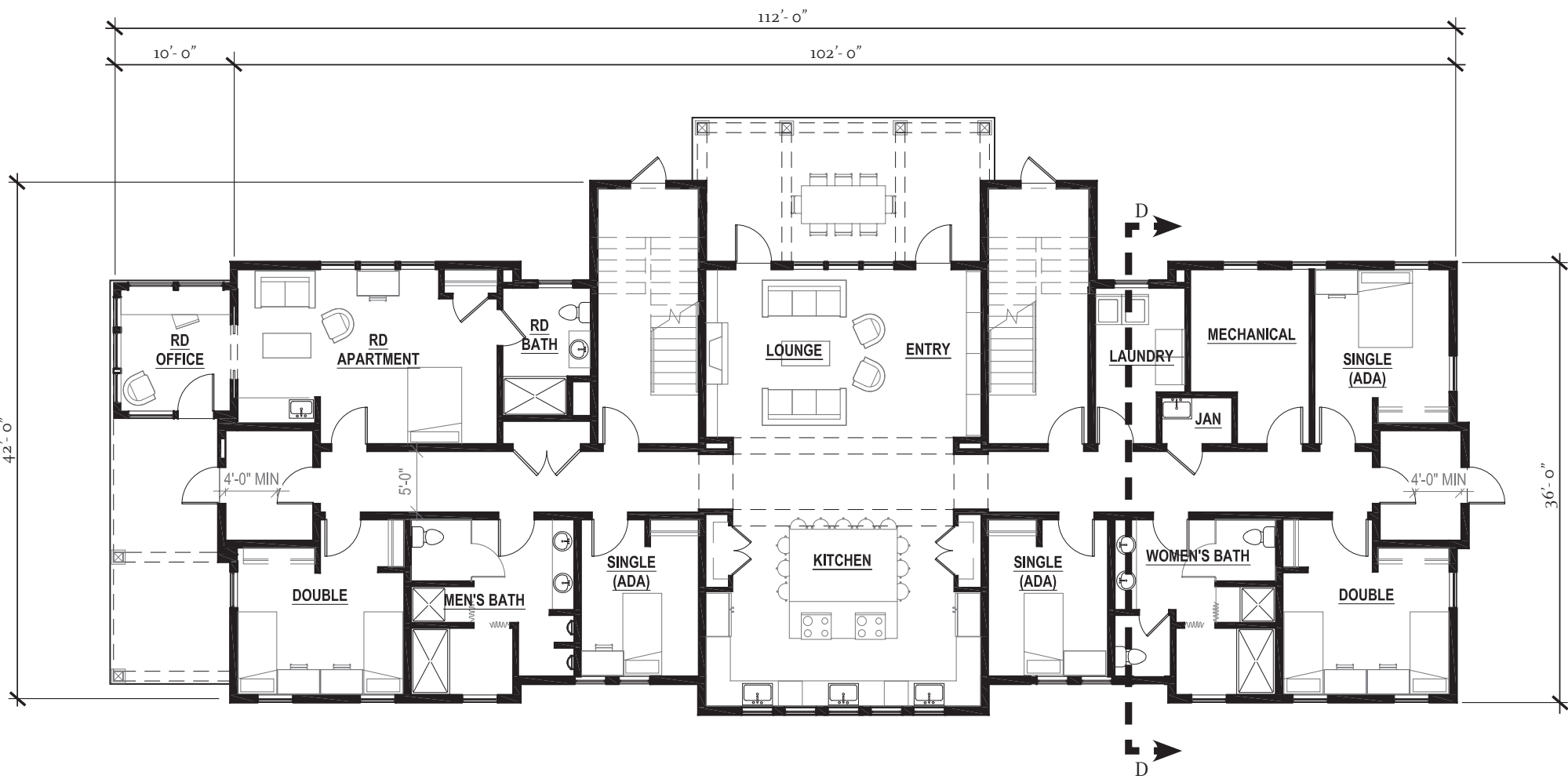
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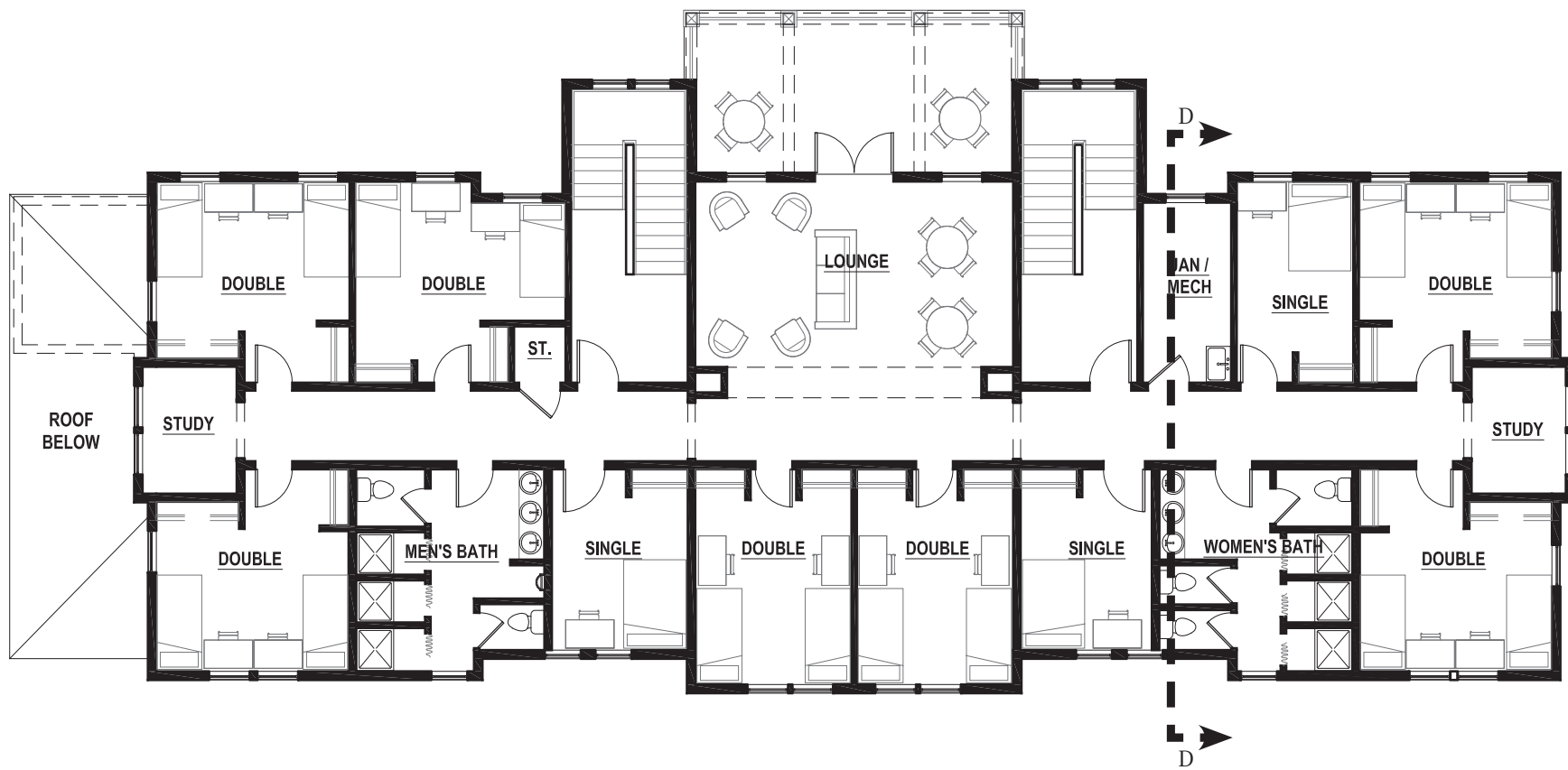
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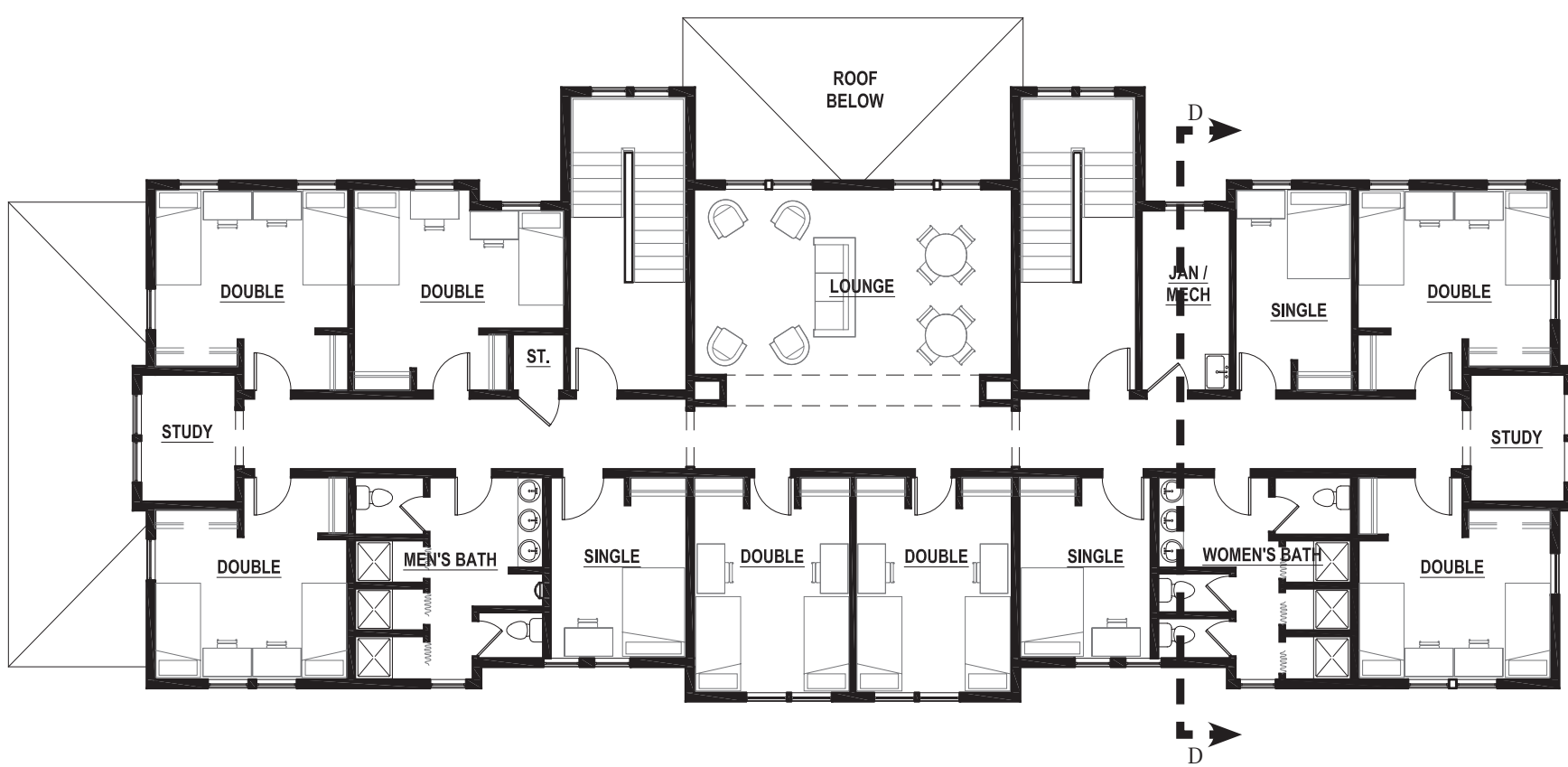




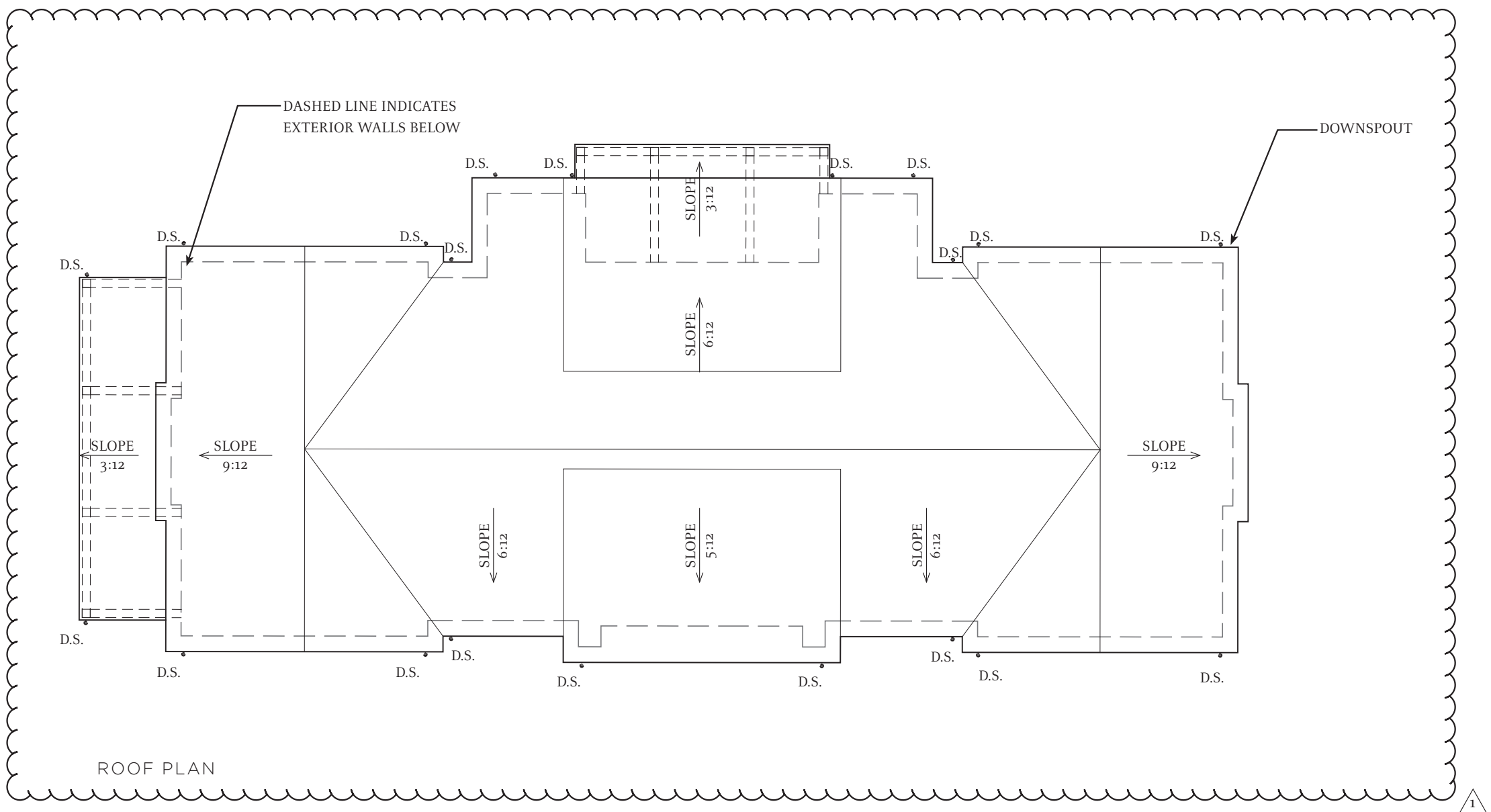
FIRST FLOOR PLAN



SECOND FLOOR PLAN



THIRD FLOOR PLAN



ROOF PLAN

| BED COUNT              |           |
|------------------------|-----------|
| First Floor:           | 8 Beds    |
| Single Room            | 4 Beds*   |
| Double Room            | 4 Beds    |
| Second Floor:          | 17 Beds   |
| Single Room            | 3 beds    |
| Double Room            | 14 Beds   |
| Third Floor:           | 17 Beds   |
| Single Room            | 3 Beds    |
| Double Room            | 14 Beds   |
| *Includes RD Apartment |           |
| Total Beds:            | 42 Beds   |
| Total Gross SF:        | 11,380 sf |



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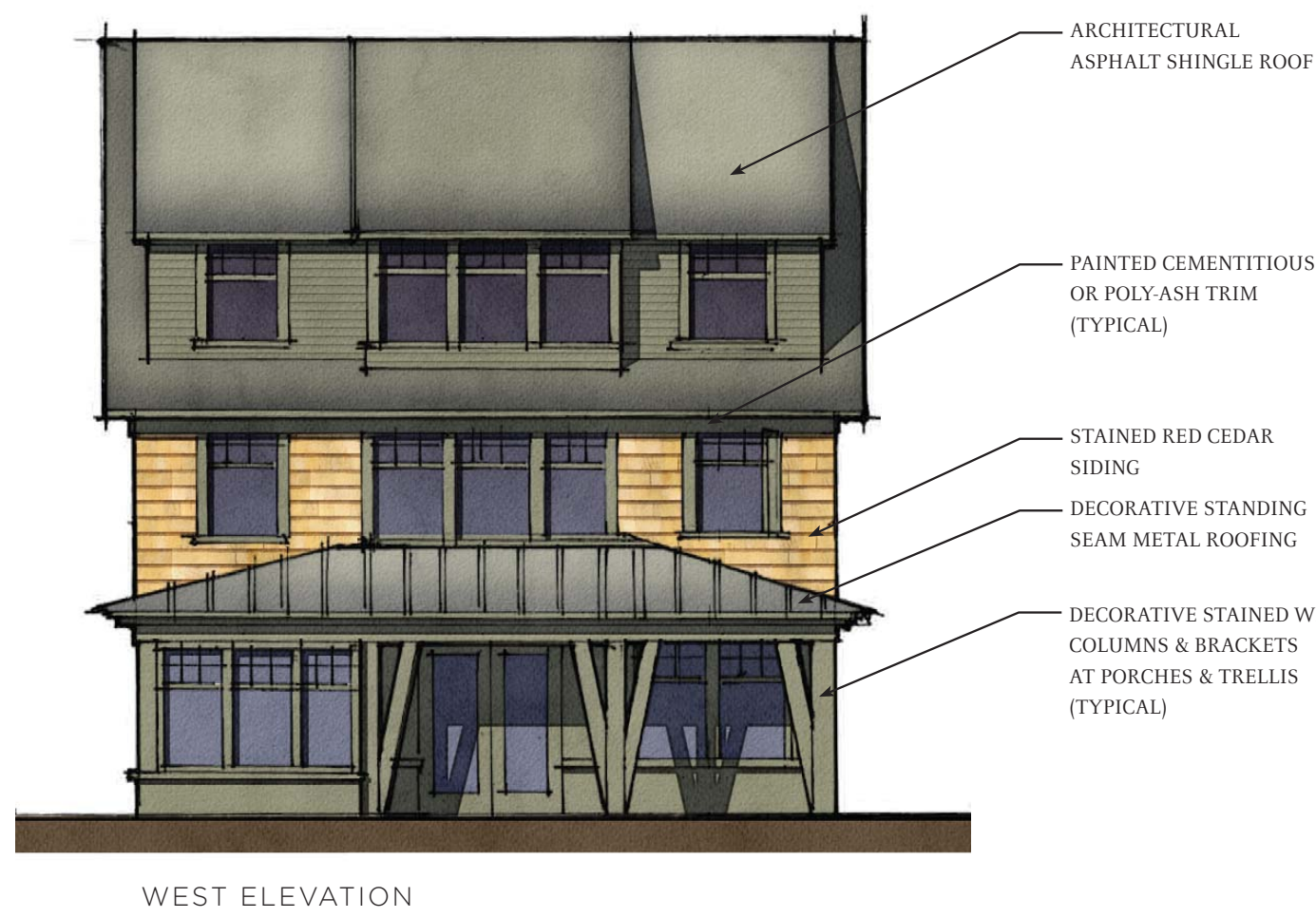
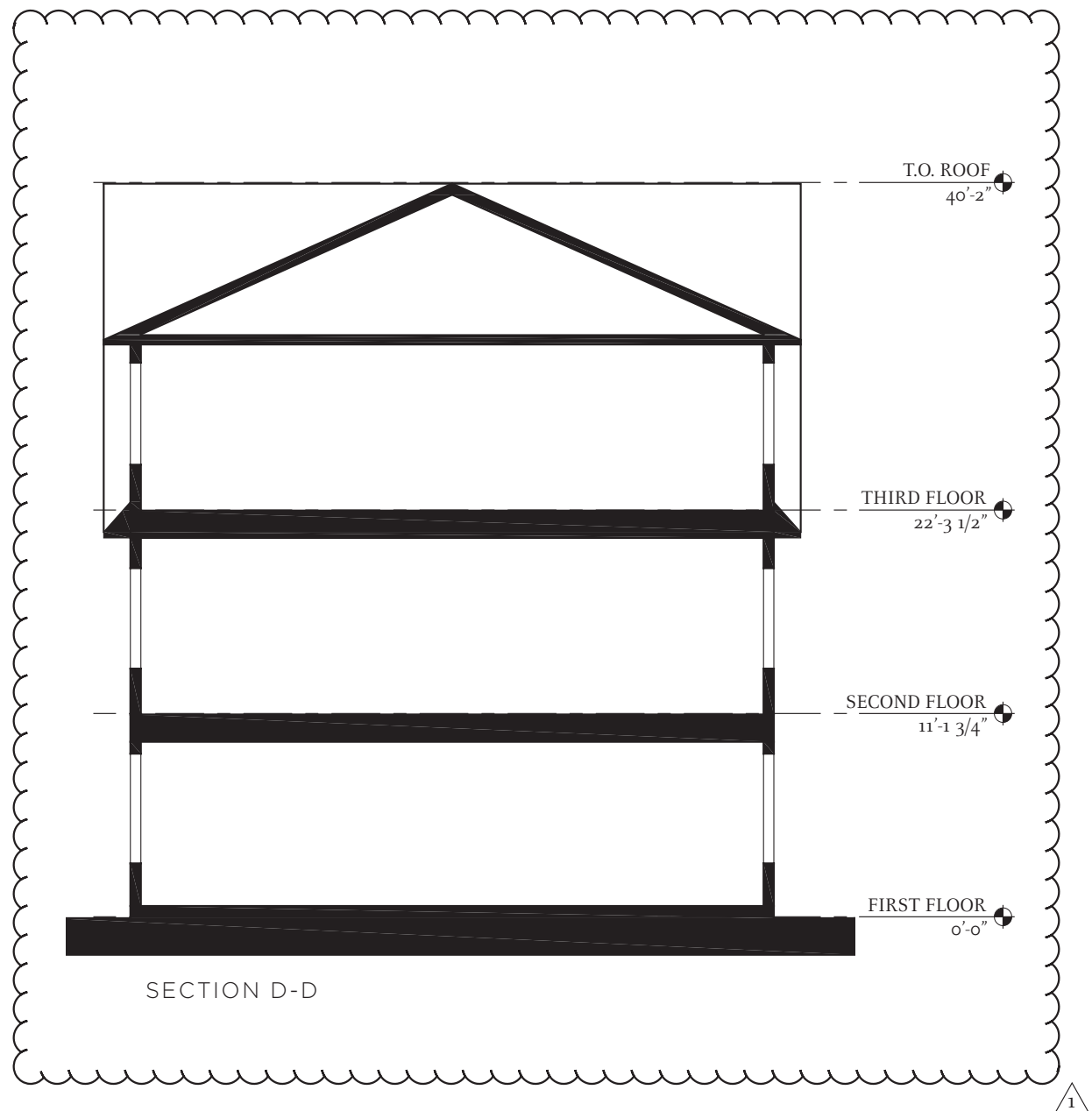
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## STORMWATER CONTROL PLAN FOR A REGULATED PROJECT

Culinary Institute of America  
Vineyard Lodge Use Permit

**Prepared for:**

CIA VINEYARD LODGE  
830 Pratt Ave  
St. Helena, CA 94574  
(415) 421-1680

**Prepared by:**

Summit Engineering, Inc.  
463 Aviation Blvd, Suite 200  
Santa Rosa, CA 95403  
Phone: 707-527-0775



Project No. 2016140  
June 21, 2016

**CIA VINEYARD LODGE USE PERMIT**  
 Project No. 2016040  
 June 21, 2016

**SUMMIT ENGINEERING, INC.**  
 Stormwater Control Plan

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CIA VINEYARD LODGE USE PERMIT  
Project No. 2016040  
June 21, 2016

SUMMIT ENGINEERING, INC.  
Stormwater Control Plan

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FIGURES

Vicinity Map

Stormwater Control and Drainage Map

This Stormwater Control Plan was prepared using the template dated July 11, 2014.



**CIA VINEYARD LODGE USE PERMIT**

Project No. 2016040

June 21, 2016

**SUMMIT ENGINEERING, INC.**

Stormwater Control Plan

**I. PROJECT DATA**

Table 1. Project Data

|                                                |                                                                                                                                                                                                              |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Project Name/Number                            | CIA Vineyard Lodge Use Permit/2016040                                                                                                                                                                        |
| Application Submittal Date                     | June 21, 2016                                                                                                                                                                                                |
| Project Location                               | 830 Pratt Ave, St. Helena, CA 94574/ APN 009-010-024                                                                                                                                                         |
| Project Phase No.                              | N/A                                                                                                                                                                                                          |
| Project Type and Description                   | Project Type: Regulated – This project consists of the demolition of the existing parking lot and dormitory building and the construction of four new dormitory lodges, access drive, and new parking areas. |
| Total Project Site Area                        | 2.61 acres                                                                                                                                                                                                   |
| Total New and Replaced Impervious Surface Area | 70,366 sqft (1.62acres)                                                                                                                                                                                      |
| Total Pre-Project Impervious Surface Area      | 59,723 sqft (1.37acres)                                                                                                                                                                                      |
| Total Post-Project Impervious Surface Area     | 77,959 sqft (1.79 acres)                                                                                                                                                                                     |

**II. SETTING****II.A. Project Location and Description**

The CIA Vineyard Lodge project site is approximately 2.61 acres and located at 830 Pratt Ave, St. Helena, CA. The project site is located approximately one mile northwest of the Town of St. Helena, 0.3 miles northeast of State Road 128, 0.2 miles west of York Creek, and has approximate coordinates of 38.513583° N & 122.475675° W. See the Vicinity Map.

**II.B. Existing Site Features and Conditions**

The project site currently consists of a parking lot and two dormitory buildings. The area surrounding the project boundary consists of vineyards and agricultural land. The project site is relatively flat with average slopes of the approximately 1% towards the eastern portion of the property. The elevation of the project site ranges from 243 to 250 feet above mean sea level (msl). Surface stormwater runoff from the site generally sheet flows towards the trapezoidal ditch located along the northeast property line and outlets via a valley gutter in a road side swale along Pratt Avenue. Drainage from the site eventually discharges to the Napa River.

Based on mapping from the National Resources Conservation Service (NRCS) Web Soil Survey, the project site soils are classified as Bale loam clay (104 and 105); both being in Hydrologic Soil Group "B". According to the NRCS, Hydrologic Soil Group "B" consists of soils having a moderate infiltration rate when thoroughly wet, consisting chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

**CIA VINEYARD LODGE USE PERMIT**

Project No. 2016040

June 21, 2016

**SUMMIT ENGINEERING, INC.**

Stormwater Control Plan

**II.C. Opportunities and Constraints for Stormwater Control**

Landscaped areas located throughout the project site can be utilized for bioretention facilities and self-retaining areas. The soil at the project site also allows for moderate infiltration.

Constraints for drainage at the site include the relative flat site with average slopes of approximately 1%.

**III. LOW IMPACT DEVELOPMENT DESIGN STRATEGIES****III.A. Optimization of Site Layout****III.A.1. Limitation of development envelope**

Project limitations such as the minimal slope at the site require many of the landscape areas to be self-retaining areas. LID Facilities (SCMs) are proposed to be adjacent to the proposed impervious areas not draining to self-treating areas. Landscaped areas shall be provided throughout the site to promote infiltration and treatment.

**III.A.2. Preservation of natural drainage features**

Constructed vegetated swales are currently at the site. The existing drainage pattern for the site shall be preserved where feasible.

**III.A.3. Setbacks from creeks, wetlands, and riparian habitats**

Development is not proposed to be performed within 20 feet or more of nearby creeks and riparian habitats.

**III.A.4. Minimization of imperviousness**

Impervious surfacing of the site shall be minimized with landscaped areas adjacent to proposed improvements.

**III.A.5. Use of drainage as a design element**

Grass-line interceptor swales adjacent to a portion of impervious area shall be utilized for both treatment and aesthetics and convey runoff to LID facilities.

**III.B. Use of Permeable Pavements**

Permeable pavements will not be used in this project as surfacing is limited to the asphalt concrete for the parking and access drive areas, and concrete for sidewalks.

**III.C. Dispersal of Runoff to Pervious Areas**

Runoff from Area 25 will sheetflow onto the adjacent vineyards and roadside drainage.

**III.D. Stormwater Control Measures**

This project will follow the "Design Guidance for Stormwater Treatment and Control for Projects in Marin, Sonoma, Napa, and Solano Counties (DGSTC)", prepared for the Bay Area Stormwater Management Agencies Association (BASMAA). Bio-retention LID Facilities are sized at a minimum of 4% of the equivalent tributary area, as specified in the Phase II Stormwater National Pollutant Discharge Elimination System (NPDES) Permit.

Bio-retention LID Facilities shall vary in size depending on the impervious areas for which they serve and shall be located adjacent to these areas. These facilities are designed in accordance with the Bioretention Facility Design Criteria beginning on Page 4-3 of the DGSTC, as well as Figures 4-1 and 4-2. Locations of LID facilities can be seen on the Drainage Map attached.

**CIA VINEYARD LODGE USE PERMIT**

Project No. 2016040

June 21, 2016

**SUMMIT ENGINEERING, INC.**

Stormwater Control Plan

Storm drains shall be utilized throughout the project to direct stormwater from impervious areas, to the bioretention facilities at locations specified in the Stormwater Control Plan. These new pipes shall be sized adequately to handle post project flow rates. Self-retaining areas are designed in accordance with the criteria in "Areas draining to self-retaining areas" on page 4-2 of the DGSTC: a maximum ratio of two parts impervious to one part pervious area.

Running parallel to the access drive, grass-lined interceptor swales shall be utilized to convey and treat runoff from access drive. All swales shall be designed to handle runoff from the 100-year storm event.

**IV. DOCUMENTATION OF DRAINAGE DESIGN****IV.A. Descriptions of Each Drainage Management Area****IV.A.1. Table of Drainage Management Areas**

Table 2. Drainage Management Areas

| DMA Region | Surface Type     | Area(acres) |
|------------|------------------|-------------|
| 1          | Asphalt/Rooftop  | 0.20        |
| 2          | Rooftop          | 0.11        |
| 3          | Concrete         | 0.03        |
| 4          | Asphalt          | 0.09        |
| 5          | Rooftop          | 0.09        |
| 6          | Rooftop/Concrete | 0.06        |
| 7          | Landscaping      | 0.07        |
| 8          | Rooftop/Concrete | 0.06        |
| 9          | Rooftop/Concrete | 0.06        |
| 10         | Landscaping      | 0.02        |
| 11         | Sidewalk         | 0.01        |
| 12         | Rooftop/Concrete | 0.05        |
| 13         | Landscaping      | 0.03        |
| 14         | Asphalt/Concrete | 0.16        |
| 15         | Concrete         | 0.03        |
| 16         | Landscaping      | 0.02        |
| 17         | Rooftop/Concrete | 0.06        |
| 18         | Concrete         | 0.01        |
| 19         | Landscaping      | 0.01        |
| 20         | Concrete         | 0.03        |
| 21         | Landscaping      | 0.02        |
| 22         | Asphalt          | 0.03        |
| 23         | Asphalt          | 0.04        |
| 24         | Asphalt          | 0.34        |
| 25         | Asphalt          | 0.11        |
| 26         | Concrete         | 0.02        |

**CIA VINEYARD LODGE USE PERMIT**

Project No. 2016040

June 21, 2016

**SUMMIT ENGINEERING, INC.**

Stormwater Control Plan

**IV.A.2. Drainage Management Area Descriptions**

**DMA 1**, totaling 8,531 square feet, is comprised of asphalt concrete surfacing. DMA 1 drains to Stormwater Control Measure LIDF 1.

**DMA 2**, totaling 4,743 square feet, is comprised of rooftop. DMA 2 drains to Stormwater Control Measure LIDF 1.

**DMA 3**, totaling 1,478 square feet, is comprised of concrete sidewalk. DMA 3 drains to Stormwater Control Measure LIDF 1.

**DMA 4**, totaling 4,014 square feet, is comprised of asphalt concrete parking. DMA 4 drains to Stormwater Control Measure LIDF 2.

**DMA 5**, totaling 3,780 square feet, is comprised of rooftop. DMA 5 drains to Stormwater Control Measure LIDF 2.

**DMA 6**, totaling 2,699 square feet, is comprised of rooftop and concrete sidewalk. DMA 6 drains to self-retaining area, DMA 7.

**DMA 7**, totaling 3,088 square feet, is a self-retaining area comprised of native grasses and trees. Native flora in the receiving area provides infiltration and treatment opportunities.

**DMA 8**, totaling 2,698 square feet, is comprised of rooftop and concrete sidewalk. DMA 8 drains to Stormwater Control Measure LIDF 3.

**DMA 9**, totaling 2,715 square feet, is comprised of rooftop and concrete sidewalk. DMA 9 drains to Stormwater Control Measure LIDF 3.

**DMA 10**, totaling 657 square feet, is comprised of landscaping. DMA 10 drains to Stormwater Control Measure LIDF 3.

**DMA 11**, totaling 275 square feet, is comprised of concrete sidewalk. DMA 11 drains to Stormwater Control Measure LIDF 3.

**DMA 12**, totaling 2,296 square feet, is comprised of rooftop and concrete sidewalk. DMA 12 drains to self-retaining area, DMA 13.

**DMA 13**, totaling 1,186 square feet, is a self-retaining area comprised of native grasses and trees. Native flora in the receiving area provides infiltration and treatment opportunities.

**DMA 14**, totaling 7,039 square feet, is comprised of asphalt and concrete. DMA 14 drains to Stormwater Control Measure LIDF 4.

**DMA 15**, totaling 1,283 square feet, is comprised of concrete sidewalk. DMA 15 drains to self-retaining area, DMA 16.

**DMA 16**, totaling 684 square feet, is a self-retaining area comprised of native grasses and trees. Native flora in the receiving area provides infiltration and treatment opportunities.

**DMA 17**, totaling 2,455 square feet, is comprised of rooftop and concrete. DMA 17 drains to Stormwater Control Measure LIDF 5.

**DMA 18**, totaling 511 square feet, is comprised of concrete sidewalk. DMA 18 drains to self-retaining area, DMA 19.

**DMA 19**, totaling 262 square feet, is a self-retaining area comprised of native grasses and trees. Native flora in the receiving area provides infiltration and treatment opportunities.

**DMA 20**, totaling 1,263 square feet, is comprised of concrete sidewalk. DMA 20 drains to self-retaining area, DMA 21.

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**DMA 21**, totaling 982 square feet, is a self-retaining area comprised of native grasses and trees. Native flora in the receiving area provides infiltration and treatment opportunities.

**DMA 22**, totaling 1,175 square feet, is comprised of asphalt. DMA 22 drains to Stormwater Control Measure LIDF 6.

**DMA 23**, totaling 1,717 square feet, is comprised of asphalt. DMA 23 drains to Stormwater Control Measure LIDF 7.

**DMA 24**, totaling 14,815 square feet, is comprised of asphalt. DMA 24 drains to Stormwater Control Measure LIDF 8.

**DMA 25**, totaling 4,887 square feet, is comprised of asphalt. DMA 25 drains to surrounding vineyard area, maintaining the existing drainage pattern at this location.

**DMA 26**, totaling 2,678 square feet, is comprised of concrete sidewalk. DMA 26 drains to Stormwater Control Measure LIDF 9.

IV.B. Tabulation and Sizing Calculations

IV.B.1. Information Summary for Bioretention Facility Design

| Total Project Area: 2.61 acres          |                                                     |
|-----------------------------------------|-----------------------------------------------------|
| <b>LIDF 1 Area:</b> 631 ft <sup>2</sup> | <b>DMA 1, 2, 3 Area:</b> 14,752 ft <sup>2</sup>     |
| <b>LIDF 2 Area:</b> 327 ft <sup>2</sup> | <b>DMA 4, 5 Area:</b> 7,794 ft <sup>2</sup>         |
| <b>LIDF 3 Area:</b> 257 ft <sup>2</sup> | <b>DMA 8, 9, 10, 11 Area:</b> 6,345 ft <sup>2</sup> |
| <b>LIDF 4 Area:</b> 309 ft <sup>2</sup> | <b>DMA 14 Area:</b> 7,039 ft <sup>2</sup>           |
| <b>LIDF 5 Area:</b> 189 ft <sup>2</sup> | <b>DMA 17 Area:</b> 2,455 ft <sup>2</sup>           |
| <b>LIDF 6 Area:</b> 60 ft <sup>2</sup>  | <b>DMA 22 Area:</b> 1,175 ft <sup>2</sup>           |
| <b>LIDF 7 Area:</b> 141 ft <sup>2</sup> | <b>DMA 23 Area:</b> 1,717 ft <sup>2</sup>           |
| <b>LIDF 8 Area:</b> 602 ft <sup>2</sup> | <b>DMA 24 Area:</b> 14,815 ft <sup>2</sup>          |
| <b>LIDF 9 Area:</b> 298 ft <sup>2</sup> | <b>DMA 26 Area:</b> 2,678 ft <sup>2</sup>           |

IV.B.2. Self-Treating Areas

There are no self-treating areas on this project site.

IV.B.3. Self-Retaining Areas

Table 3. Self-Retaining Areas

| DMA Region | Area (square feet) |
|------------|--------------------|
| DMA 7      | 3,088              |

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|        |       |
|--------|-------|
| DMA 13 | 1,186 |
| DMA 16 | 684   |
| DMA 19 | 262   |
| DMA 21 | 982   |

IV.B.4. Areas Draining to Self-Retaining Areas

Table 4. Areas Draining to Self-Retaining Areas

| DMA Region | Area (square feet) | Post-project Surface Type | Runoff Factor | Receiving self-retaining DMA | Receiving self-retaining DMA Area (square feet) |
|------------|--------------------|---------------------------|---------------|------------------------------|-------------------------------------------------|
| DMA 6      | 2,699              | Rooftop/Concrete          | 1.0           | DMA 7                        | 3,088                                           |
| DMA 12     | 2,296              | Rooftop/Concrete          | 1.0           | DMA 13                       | 1,186                                           |
| DMA 15     | 1,283              | Concrete                  | 1.0           | DMA 16                       | 684                                             |
| DMA 18     | 511                | Concrete                  | 1.0           | DMA 19                       | 262                                             |
| DMA 20     | 1,263              | Concrete                  | 1.0           | DMA 19                       | 982                                             |

IV.B.5. Areas Draining to Bio-retention Facilities

Table 5. LID Facility 1

| DMA Region   | DMA Area (ft <sup>2</sup> ) | Post-project surface type | DMA Runoff factor | DMA Area × runoff factor (ft <sup>2</sup> ) | Facility Name: LIDF 1 |                                     |                                      |
|--------------|-----------------------------|---------------------------|-------------------|---------------------------------------------|-----------------------|-------------------------------------|--------------------------------------|
|              |                             |                           |                   |                                             | SCM Sizing factor     | Minimum SCM Size (ft <sup>2</sup> ) | Proposed SCM Size (ft <sup>2</sup> ) |
| 1            | 8,531                       | Asphalt                   | 1.0               | 8,531                                       | 0.04                  | 590                                 | 631                                  |
| 2            | 4,743                       | Rooftop                   | 1.0               | 4,743                                       |                       |                                     |                                      |
| 3            | 1,478                       | Concrete                  | 1.0               | 1,478                                       |                       |                                     |                                      |
| <b>Total</b> |                             |                           |                   | 14,752                                      | 0.04                  | 590                                 | 631                                  |

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Table 6. LID Facility 2

| DMA Region   | DMA Area (ft <sup>2</sup> ) | Post-project surface type | DMA Runoff factor | DMA Area × runoff factor (ft <sup>2</sup> ) | Facility Name: LIDF 2 |                                     |                                      |
|--------------|-----------------------------|---------------------------|-------------------|---------------------------------------------|-----------------------|-------------------------------------|--------------------------------------|
|              |                             |                           |                   |                                             |                       |                                     |                                      |
| 4            | 4,014                       | Asphalt                   | 1.0               | 4,014                                       | SCM Sizing factor     | Minimum SCM Size (ft <sup>2</sup> ) | Proposed SCM Size (ft <sup>2</sup> ) |
| 5            | 3,781                       | Rooftop                   | 1.0               | 3,781                                       |                       |                                     |                                      |
| <b>Total</b> |                             |                           |                   | 7,794                                       | 0.04                  | 312                                 | 327                                  |

Table 7. LID Facility 3

| DMA Region   | DMA Area (ft <sup>2</sup> ) | Post-project surface type | DMA Runoff factor | DMA Area × runoff factor (ft <sup>2</sup> ) | Facility Name: LIDF 3 |                                     |                                      |
|--------------|-----------------------------|---------------------------|-------------------|---------------------------------------------|-----------------------|-------------------------------------|--------------------------------------|
|              |                             |                           |                   |                                             |                       |                                     |                                      |
| 8            | 2,698                       | Rooftop/Concrete          | 1.0               | 2,698                                       | SCM Sizing factor     | Minimum SCM Size (ft <sup>2</sup> ) | Proposed SCM Size (ft <sup>2</sup> ) |
| 9            | 2,715                       | Rooftop/Concrete          | 1.0               | 2,715                                       |                       |                                     |                                      |
| 10           | 657                         | Landscaping               | 0.1               | 66                                          |                       |                                     |                                      |
| 11           | 257                         | Concrete                  | 1.0               | 257                                         |                       |                                     |                                      |
| <b>Total</b> |                             |                           |                   | 5,754                                       | 0.04                  | 230                                 | 257                                  |

Table 8. LID Facility 4

| DMA Region   | DMA Area (ft <sup>2</sup> ) | Post-project surface type | DMA Runoff factor | DMA Area × runoff factor (ft <sup>2</sup> ) | Facility Name: LIDF 4 |                                     |                                      |
|--------------|-----------------------------|---------------------------|-------------------|---------------------------------------------|-----------------------|-------------------------------------|--------------------------------------|
|              |                             |                           |                   |                                             |                       |                                     |                                      |
| 14           | 7,039                       | Asphalt/Concrete          | 1.0               | 7,039                                       | SCM Sizing factor     | Minimum SCM Size (ft <sup>2</sup> ) | Proposed SCM Size (ft <sup>2</sup> ) |
|              |                             |                           |                   |                                             |                       |                                     |                                      |
| <b>Total</b> |                             |                           |                   | 7,039                                       | 0.04                  | 282                                 | 309                                  |



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Table 9. LID Facility 5

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| DMA Region   | DMA Area (ft <sup>2</sup> ) | Post-project surface type | DMA Runoff factor | DMA Area × runoff factor (ft <sup>2</sup> ) | Facility Name: LIDF 5 |                                     |                                      |
|--------------|-----------------------------|---------------------------|-------------------|---------------------------------------------|-----------------------|-------------------------------------|--------------------------------------|
|              |                             |                           |                   |                                             |                       |                                     |                                      |
| 17           | 2,455                       | Rooftop/Concrete          | 1.0               | 2,455                                       | SCM Sizing factor     | Minimum SCM Size (ft <sup>2</sup> ) | Proposed SCM Size (ft <sup>2</sup> ) |
|              |                             |                           |                   |                                             |                       |                                     |                                      |
| <b>Total</b> |                             |                           |                   | 2,455                                       | 0.04                  | 98                                  | 189                                  |

Table 10. LID Facility 6

| DMA Region   | DMA Area (ft <sup>2</sup> ) | Post-project surface type | DMA Runoff factor | DMA Area × runoff factor (ft <sup>2</sup> ) | Facility Name: LIDF 6 |                                     |                                      |
|--------------|-----------------------------|---------------------------|-------------------|---------------------------------------------|-----------------------|-------------------------------------|--------------------------------------|
|              |                             |                           |                   |                                             |                       |                                     |                                      |
| 22           | 1,175                       | Asphalt                   | 1.0               | 1,175                                       | SCM Sizing factor     | Minimum SCM Size (ft <sup>2</sup> ) | Proposed SCM Size (ft <sup>2</sup> ) |
|              |                             |                           |                   |                                             |                       |                                     |                                      |
| <b>Total</b> |                             |                           |                   | 1,175                                       | 0.04                  | 47                                  | 60                                   |

Table 11. LID Facility 7

| DMA Region   | DMA Area (ft <sup>2</sup> ) | Post-project surface type | DMA Runoff factor | DMA Area × runoff factor (ft <sup>2</sup> ) | Facility Name: LIDF 7 |                                     |                                      |
|--------------|-----------------------------|---------------------------|-------------------|---------------------------------------------|-----------------------|-------------------------------------|--------------------------------------|
|              |                             |                           |                   |                                             |                       |                                     |                                      |
| 23           | 1,717                       | Asphalt                   | 1.0               | 1,717                                       | SCM Sizing factor     | Minimum SCM Size (ft <sup>2</sup> ) | Proposed SCM Size (ft <sup>2</sup> ) |
|              |                             |                           |                   |                                             |                       |                                     |                                      |
| <b>Total</b> |                             |                           |                   | 1,717                                       | 0.04                  | 69                                  | 141                                  |

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Table 12. LID Facility 8

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| DMA Region   | DMA Area (ft <sup>2</sup> ) | Post-project surface type | DMA Runoff factor | DMA Area × runoff factor (ft <sup>2</sup> ) | Facility Name: LIDF 8 |                                     |                                      |
|--------------|-----------------------------|---------------------------|-------------------|---------------------------------------------|-----------------------|-------------------------------------|--------------------------------------|
|              |                             |                           |                   |                                             | SCM Sizing factor     | Minimum SCM Size (ft <sup>2</sup> ) | Proposed SCM Size (ft <sup>2</sup> ) |
| 24           | 14,815                      | Asphalt                   | 1.0               | 14,815                                      |                       |                                     |                                      |
|              |                             |                           |                   |                                             |                       |                                     |                                      |
| <b>Total</b> |                             |                           |                   | 14,815                                      | 0.04                  | 593                                 | 602                                  |

Table 13. LID Facility 9

| DMA Region   | DMA Area (ft <sup>2</sup> ) | Post-project surface type | DMA Runoff factor | DMA Area × runoff factor (ft <sup>2</sup> ) | Facility Name: LIDF 9 |                                     |                                      |
|--------------|-----------------------------|---------------------------|-------------------|---------------------------------------------|-----------------------|-------------------------------------|--------------------------------------|
|              |                             |                           |                   |                                             | SCM Sizing factor     | Minimum SCM Size (ft <sup>2</sup> ) | Proposed SCM Size (ft <sup>2</sup> ) |
| 26           | 2,678                       | Concrete                  | 1.0               | 2,678                                       |                       |                                     |                                      |
|              |                             |                           |                   |                                             |                       |                                     |                                      |
| <b>Total</b> |                             |                           |                   | 2,678                                       | 0.04                  | 107                                 | 298                                  |

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**V. SOURCE CONTROL MEASURES****V.A. Site activities and potential sources of pollutants**

- On-site Storm Drain Inlets
- Parking Areas
- Landscape Maintenance

**V.B. Summary of Maintenance Requirements for Each Stormwater Facility**

- Access drive shall be designed according to the latest version of the City of St. Helena Road and Street Standards.
- Parking areas shall be designed to minimize impervious surface areas and graded to direct runoff to nearby Treatment Control BMPs to treat and remove oil and petroleum hydrocarbons.
- Energy dissipaters constructed of rip rap shall be specified at the outlets of new and reconstructed storm drains and swales to minimize erosion.
- Grass lined swales shall be incorporated into the design to treat runoff and minimize erosion.
- Existing trees, shrubs and groundcover shall be preserved where feasible.
- Plant species tolerant of saturated soil conditions shall be specified in landscaped areas to be utilized for stormwater infiltration and treatment.
- Trash storage areas shall be paved and stormwater from adjacent areas shall not be directed to the storage area. Containers shall have lids.
- All roofs, gutters, and downspouts made of unprotected metals shall discharge to landscaped areas designed to infiltrate and detain stormwater runoff.

Table 14. Source Control Table

| Potential source of runoff pollutants        | Permanent source control BMPs                                                                                                                                                                           | Operational source control BMPs                                                                                                                                                                                                                                                                               |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| On-site Storm Drain Inlets                   | Mark all inlets with the words "No Dumping! Flows to Creek" or similar.                                                                                                                                 | <ul style="list-style-type: none"> <li>- Maintain and periodically replace inlet markings.</li> <li>- Provide stormwater pollution prevention information to new site owners, lessees, or operators.</li> <li>- See applicable operational BMPs in Fact Sheet SC-44, "Drainage System Maintenance"</li> </ul> |
| Landscaping/Pesticide Use/Ground Maintenance | State that final landscaping will accomplish all the following: <ul style="list-style-type: none"> <li>- Preserve existing native trees, shrubs, and ground cover to maximum extent possible</li> </ul> | <ul style="list-style-type: none"> <li>- Maintain landscaping using minimum or no pesticides</li> <li>- See applicable operational BMPs in Fact Sheet SC-41, "building and Grounds Maintenance," in the CASQA Stormwater Quality</li> </ul>                                                                   |

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|               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                          |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|               | <ul style="list-style-type: none"> <li>- Design landscaping to minimize irrigation and runoff, to promote surface infiltration where appropriate, and to minimize the use of fertilizers and pesticides that can contribute to stormwater pollution.</li> <li>- Where landscaped areas are used to retain or detain stormwater, specify plants that are tolerant of saturated soil conditions.</li> <li>- Consider using pest-resistant plants, especially adjacent to hardscape.</li> </ul> <p>To insure successful establishment, select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.</p> | <p>Handbooks</p> <ul style="list-style-type: none"> <li>- Provide IPM information to new owners, lessees, and operators</li> </ul>                                                                                                                                                                                                       |
| Parking Areas |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <ul style="list-style-type: none"> <li>- Sweep parking lots regularly to prevent accumulation of litter and debris. Collect debris from pressure washing to prevent entry into the storm drain system. Collect washwater containing any cleaning agent or degreaser and discharge to the sanitary sewer not to a storm drain.</li> </ul> |

**V.C. Features, Materials, and Methods of Construction of Source Control BMPs**

All Source Control BMPs listed in the previous section will be implemented with corresponding and appropriate features, materials, and methods of construction.

**VI. STORMWATER FACILITY MAINTENANCE**

**VI.A. Ownership and Responsibility for Maintenance in Perpetuity**

The applicant accepts responsibility for interim operation and maintenance of stormwater treatment and flow-control facilities until such time as this responsibility is formally transferred to a subsequent owner. The owner then accepts full responsibility for the proper operation and maintenance of all stormwater facilities.

**VI.B. Summary of Maintenance Requirements for Each Stormwater Facility**

Any maintenance of all bio-retention facilities will be financed and implemented by the owner of the CIA Vineyard Lodge project. All facilities shall be inspected annually and documented. Any necessary repairs to facilities shall also be documented. Updated information, including contact information, must be provided to the municipality if property is sold and whenever designated individuals or contractors change.

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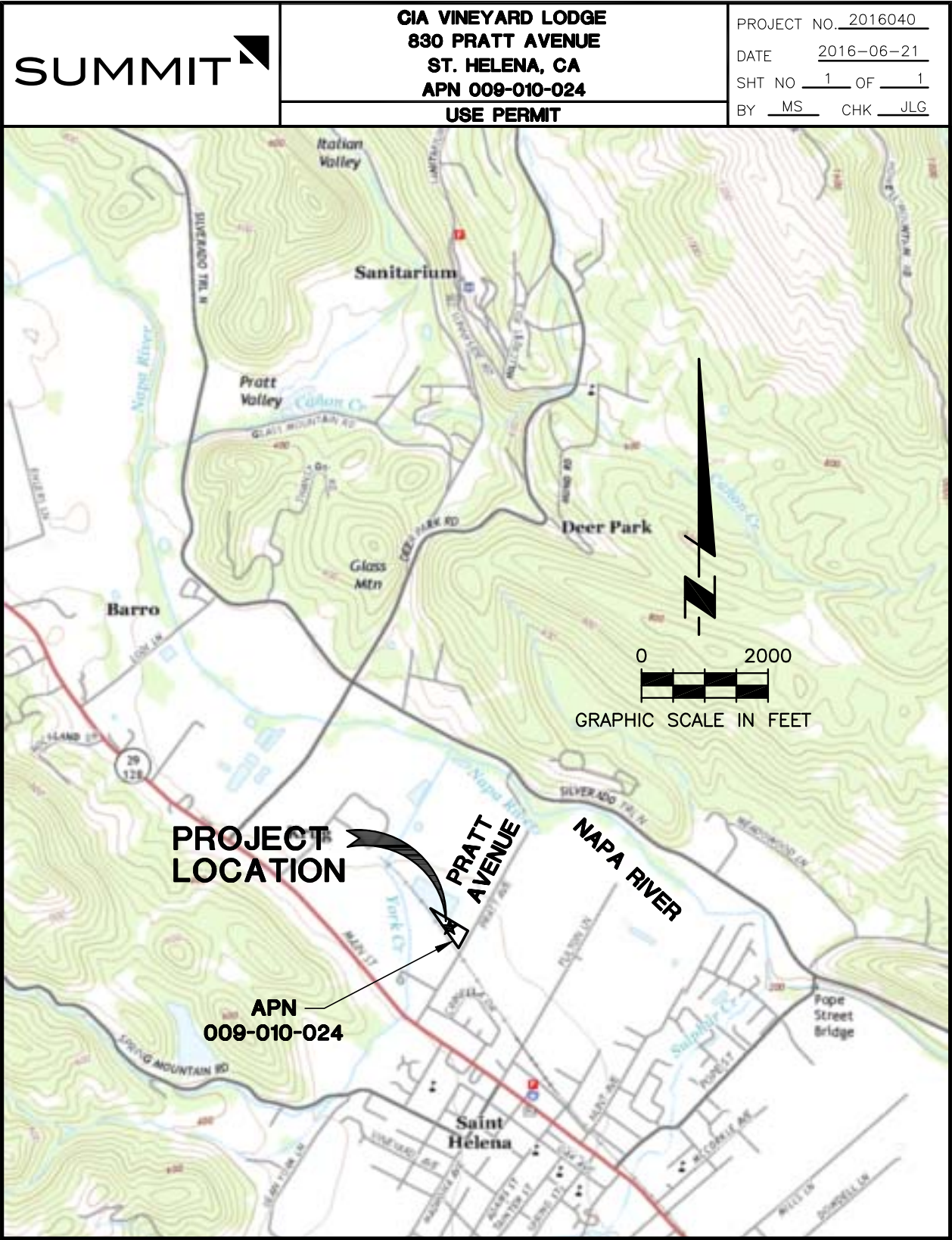
**VII. CONSTRUCTION CHECKLIST**

Table 15. Construction Checklist

| <b>Stormwater<br/>Control Plan<br/>Page #</b> | <b>Source Control or Treatment Control Measure</b> | <b>See Plan Sheet #s</b> |
|-----------------------------------------------|----------------------------------------------------|--------------------------|
| 6                                             | LIDF 1                                             | H1                       |
| 7                                             | LIDF 2, 3, 4                                       | H1                       |
| 8                                             | LIDF 5, 6, 7                                       | H1                       |
| 9                                             | LIDF 8, 9                                          | H1                       |

**VIII. CERTIFICATIONS**

The preliminary design of stormwater treatment facilities and other stormwater pollution control measures in this plan are in accordance with the current edition of the BASMAA *Post-Construction Manual*.



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## Culinary Institute of America 830 Pratt Avenue

### GHG Emissions Analysis

#### Executive Summary

This report evaluates greenhouse gas (GHG) emissions that would be generated by the construction and operation of three proposed dormitory structures around a central courtyard serving the Culinary Institute of America campus located east of State Highway 29 in Napa County at 830 Pratt Avenue. This project is located in the Bay Area Air Quality Management District (BAAQMD) and the project would be subject to the BAAQMD rules and regulations. This evaluation uses the approach and methodology established by the BAAQMD for assessing GHG emissions.

The projected emissions for this project have been established using the current CalEEmod program developed for this purpose by the California Air Resources Board. Table 1 provides the greenhouse gas emissions of the project during construction and operation. The total project construction emissions for all phases, including demolition of the existing lodge are estimated to be a total of 389 metric tons CO<sub>2</sub>e (MTCO<sub>2</sub>e). The total annual emissions after project completion is estimated to be a net value of 174 MTCO<sub>2</sub>e including the exclusion of operations emissions associated with the existing lodge to be removed. The emissions by year are provided below. The annual emissions from both construction and operations are below the threshold of significance for all years.

| Culinary Institute of America - 830 Pratt |                                     |           |                                             |           |           |
|-------------------------------------------|-------------------------------------|-----------|---------------------------------------------|-----------|-----------|
| Emissions by Phase                        | GHG Emissions (MTCO <sub>2</sub> e) |           | GHG Emissions by Year (MTCO <sub>2</sub> e) |           |           |
|                                           | Construction                        | Operation | 2017                                        | 2018      | 2019      |
| Existing Lodge emissions (to be removed)  | NA                                  | 139.5105  | -139.5105                                   | -139.5105 | -139.5105 |
| Demolition of Existing                    | 23.4431                             | NA        | 23.4431                                     | 0         | 0         |
| Phase 1: 3 Story Dorm                     | 227.908                             | 130.1657  | 227.908                                     | 130.1657  | 130.1657  |
| Phase 2: 2 Story Dorm                     | 68.8951                             | 97.5655   | 0                                           | 68.8951   | 97.5655   |
| Phase 2: 3 Story Dorm                     | 68.4987                             | 85.714    | 0                                           | 68.4987   | 85.714    |
| Total Annual Emissions                    |                                     |           | 111.8406                                    | 128.049   | 173.9347  |
| Below Threshold of Significance           |                                     |           | Yes                                         | Yes       | Yes       |

Table 1: Unmitigated GHG Emissions Summary



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The Bay Area Air Quality Management District (BAAQMD) has recommended value of 1,100 annual metric tons CO<sub>2</sub>e as the threshold of significance for greenhouse gas emissions. This threshold is limited to operational GHG emissions. The BAAQMD recommends using this threshold or compliance with a qualified Climate Action Plan (CAP) for evaluation of projects. If the project is part of a qualified CAP, or emissions are less than the threshold of significance (1,100 metric tons CO<sub>2</sub>e/yr.) it can be considered to have a less than significant GHG impact.

The annual emissions of the Culinary Institute of America project, estimated to be a maximum of 174 MTCO<sub>2</sub>e in 2019, well below the 1,100 MTCO<sub>2</sub>e threshold of significance.

### **Introduction**

This report evaluates the greenhouse gas (GHG) emissions that would be generated by the construction and operation of a proposed 40,642 sf new construction, a net increase of 26,780 sf with the removal of the existing lodge (15,682 sf). The project will be constructed in two phases with all construction projected to be completed by January 1, 2019. This project would be located east of State Highway 29 at 830 Pratt Avenue on a developed site. The estimate includes transportation emissions by users and staff in addition to emissions associated with construction and building operation. This GHG evaluation uses the approach and methodology established by the Bay Area Air Quality Management District (BAAQMD) for assessing GHG emissions.

### **Project Description**

The Culinary Institute of America project at 830 Pratt Avenue is a Vineyard Lodge located on a 2.52 acre developed site. The projected start of construction is June 2016 with an operation date of June 2017. The first full year of operation is 2018.

Figure 1 provides the project regional location. Figure 2 provides a closer view of the project site at 830 Pratt Avenue, east of Highway 29

### **Project Construction**

This project is projected to be completed in two phases, one completed in 2017 and the second in 2018. The construction work schedule is 5 days per week.



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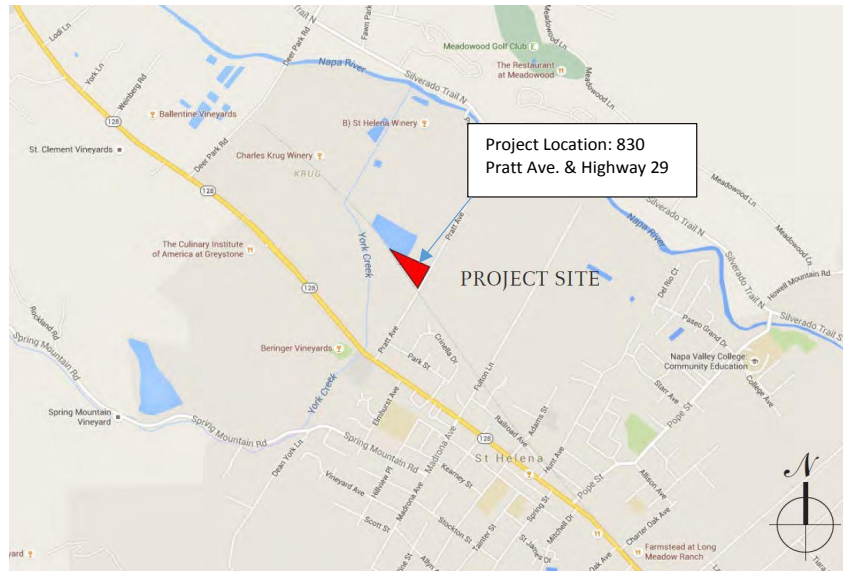


Figure 1: Project Location



Figure 2: Project Location Detail


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### Greenhouse Gas Impact Discussion:

This report estimates the GHG emissions of the proposed project using the California Emission Estimator Model (CALEEMod). The model report summarizes the greenhouse gases that would be generated during construction and annual operation of the project and compares the results to the threshold of significance established by BAAQMD.

#### Greenhouse Gas Threshold of Significance

Greenhouse gases (GHGs) are generated both from natural geological and biological processes and through human activities including the combustion of fossil fuels and industrial and agricultural processes. GHGs include carbon dioxide (CO<sub>2</sub>), nitrous oxide (N<sub>2</sub>O), methane (CH<sub>4</sub>), chlorofluorocarbons, hydrofluorocarbons and perfluorocarbons. While GHGs are emitted locally they have global implications. GHGs trap heat in the atmosphere, which heats up the surface of the Earth. This concept is known as global warming and is contributing to climate change. Changing climatic conditions pose several potential adverse impacts including sea level rise, increased risk of wildfires, degraded ecological systems, deteriorated public health, and decreased water supplies.

To address GHG's at the State level, the California legislature passed the California Global Warming Solutions Act in 2006 (Assembly Bill 32), which requires that statewide GHG emissions be reduced to 1990 levels by 2020. Executive Order S-3-05 provides the California Environmental Protection Agency with the regulatory authority to coordinate the State's effort to achieve GHG reduction targets. S-3-05 goes beyond AB 32 and calls for an 80 percent reduction below 1990 levels by 2050. Senate Bill 375 has also been adopted, which seeks to curb GHGs by reducing urban sprawl and vehicle miles traveled.

The BAAQMD adopted revised CEQA Guidelines, which included thresholds of significance for greenhouse gas emissions. The Guidelines were subsequently updated in May 2011. Based on the BAAQMD Guidelines, a project is considered to have a less-than-significant impact due to GHG emissions if it:

1. Complies with an adopted Qualified GHG Reduction Strategy;
2. Emits less than 1,100 metric tons (MT) CO<sub>2</sub>e per year; or
3. Emits less than 4.6 MT CO<sub>2</sub>e per service population per year (residents and employees).

This report estimates the project GHG emissions and compares the result to the BAAQMD threshold of significance for GHG annual emissions.

### Greenhouse Gas Impact Discussion:

The proposed project will result in the generation and emission of GHGs during construction and operation. Construction will result in GHG emissions from heavy-duty construction equipment, worker trips, and material delivery and hauling including emissions associated with the demolition of the existing Vineyard Lodge 1. Construction GHG emissions are short term and will cease once construction



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is complete. Although the BAAQMD has not established thresholds of significance for GHG emissions resulting from construction activities, BAAQMD encourages the incorporation of best management practices to reduce GHG emissions during construction.

Operation of the proposed project will result in GHG emissions from onsite lighting, heating, refrigeration and cooling of the proposed building and product, as well as the treatment and transport of water and wastewater. Additionally, GHGs from operation will result from vehicle trips associated with staff and residents transportation to and from the site. Operational GHG emissions are ongoing for the life of the project.

### CalEEMod modeling

There were two model adjustments impacting the results, each noted in the reports attached.

#### 1) Land Use CalEEMod input

- a. The project units are entered based on the number of rooms
- b. The project areas were entered based on values in the plans
- c. The project acreage was determined from the site plan.

| Land Use Type | Land Use Subtype    | Unit Amount      | Size Metric | Lot Acreage | Square Feet | Population |
|---------------|---------------------|------------------|-------------|-------------|-------------|------------|
| Residential   | Apartments Mid Rise | 39 Dwelling Unit |             | 1.25        | 17,885      | 70         |

#### 2) Operational = Mobile CalEEMod input

- a. WkDy Trip Rate (/size/day) input changed to 1 to reflect net reduction of trips upon project completion and internal shuttle per the traffic study referenced below<sup>1</sup>.
- b. Res H-W Trip Length input changed to 1 to reflect reduced trips with completion of the project per the traffic study referenced below.

| Land Use SubType    | Size Metric   | WkDy Trip Rate (/size/day) | Sat Trip Rate (/size/day) | Sun Trip Rate (/size/day) | Res H-W Trip Length (miles) | Rd H-W Trip Length (miles) |
|---------------------|---------------|----------------------------|---------------------------|---------------------------|-----------------------------|----------------------------|
| Apartments Mid Rise | Dwelling Unit | 1                          | 7.16                      | 6.07                      | 1                           |                            |

#### 3) Energy: The CalEEMod assumes compliance with 2013 CBC Title 24. This has been confirmed by the design team.

<sup>1</sup> Traffic Impact Report Culinary Institute of America Vineyard Lodge Master Plan, September 2016, Crane Transportation Group



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### Summary of Findings

#### GHG Emissions during Construction

The BAAQMD has not adopted GHG thresholds of significance for construction. The project's cumulative and annual construction emissions would both be less than the BAAQMD operational significance threshold of 1,100 metric tons per year. Therefore the proposed project GHG related construction emissions are less than significant.

The table below provides the emissions estimate for construction of the Culinary Institute of America project including the demolition of Vineyard Lodge 1.

| Construction Emissions (CalEEMod) |        |
|-----------------------------------|--------|
| Year 2017                         | 251.35 |
| Year 2018                         | 137.39 |

Table 2: Construction GHG Emissions (by year)

#### GHG Annual Operational Emissions

The project unmitigated annual operational emissions are provided in the table below.

| Culinary Institute of America Vineyard Lodge                              |                                           |                                      |                                      |                                      |              |                 |
|---------------------------------------------------------------------------|-------------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------|-----------------|
| Operations Unmitigate Annual GHG Emissions MTCO <sub>2</sub> e (CalEEMod) |                                           |                                      |                                      |                                      |              |                 |
| Emissions Category                                                        | Existing Vineyard Lodge 1 (to be removed) | Phase 1: Building A (operation 2018) | Phase 2: Building B (operation 2019) | Phase 2: Building C (operation 2019) | Annual Total | Below Threshold |
| Area                                                                      | 3.17                                      | 3.02                                 | 2.16                                 | 2.01                                 |              |                 |
| Energy                                                                    | 67.81                                     | 57.18                                | 46.31                                | 38.12                                |              |                 |
| Mobile                                                                    | 50.69                                     | 53.00                                | 36.91                                | 34.27                                |              |                 |
| Waste                                                                     | 8.58                                      | 8.16                                 | 5.86                                 | 5.44                                 |              |                 |
| Water                                                                     | 9.26                                      | 8.80                                 | 6.32                                 | 5.87                                 |              |                 |
| Operations Total 2018                                                     | -139.51                                   | 130.17                               | 0.00                                 | 0.00                                 | -9.34        | yes             |
| Operations Total 2019                                                     | -139.51                                   | 130.17                               | 97.57                                | 85.71                                | 173.93       | yes             |
| Construction Emissions (CalEEMod)                                         |                                           |                                      |                                      |                                      |              |                 |
| Construction Year 2017                                                    | 23.44                                     | 227.91                               | 0.00                                 | 0.00                                 | 251.35       | yes             |
| Construction Year 2018                                                    | 0.00                                      | 0.00                                 | 68.90                                | 68.50                                | 137.39       | yes             |

Table 3: Operations Unmitigated Emissions<sup>2</sup>

This project will employ measures that will reduce operational emissions below code requirements. These features are identified in the project descriptions, plans and traffic study

- Transfer of function to the Napa Facility: "The 15-trip decrease in Master Plan-related trips during summer/fall Thursday AM peak traffic conditions on SR 29-128 would be primarily related to the reduction in Administrative staff and the SIG program at Greystone. The 21-trip

<sup>2</sup> BAAQMD has not established thresholds for construction period emissions





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decrease in Master Plan-related trips during summer/fall Thursday PM peak traffic conditions on SR 29-128 would be primarily related to the relocation of the restaurant and staff, as well as Administrative staff and the SIG program.”<sup>3</sup>

- Student shuttle: The housing is occupied exclusively by students. Resident students are not allowed to park at Greystone; they must utilize the existing CIA shuttle service, bike or walk to and from the Lodge and the Greystone facility.

Other emissions reduction initiatives include:

- Increased Density
- Limit Parking Supply
- Increase Transit Frequency
- Implement Trip Reduction Program

The CalEEMod version 2013.2.2 emissions model was used to estimate CO<sub>2</sub>e emissions from construction and annual operation. The GHG construction emission estimates assumed construction would begin in 2016 and completed by 2017. The estimate is based on the first full year of operation of 2018. In summary, this construction and operation emissions for this project do not exceed the threshold of significance recommended by the Bay Area Air Quality Management District (BAAQMD).

The results are provided in the attachment on the following pages.

**Appendix:** CalEEMod model results

- 1) Existing Lodge emissions and demolition
- 2) 830 Pratt Avenue Phase 1 Building A
- 3) 830 Pratt Avenue Phase 2 Mid-rise Building C
- 4) 830 Pratt Avenue Phase 2 low-rise Building B
- 5) Greenhouse Gas Emissions Summary Form

<sup>3</sup> Traffic Impact Report Culinary Institute of America Vineyard Lodge Master Plan, September 2016, Crane Transportation Group

**Culinary Institute of America 830 Pratt St Helena Existing Lodge**  
**Bay Area AQMD Air District, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses           | Size  | Metric        | Lot Acreage | Floor Surface Area | Population |
|---------------------|-------|---------------|-------------|--------------------|------------|
| Apartments Low Rise | 41.00 | Dwelling Unit | 1.25        | 15,682.00          | 41         |

### 1.2 Other Project Characteristics

|                                |                                |                                |       |                                  |       |
|--------------------------------|--------------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Rural                          | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 64    |
| <b>Climate Zone</b>            | 4                              | <b>Operational Year</b>        | 2019  |                                  |       |
| <b>Utility Company</b>         | Pacific Gas & Electric Company |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 641.35                         | <b>CH4 Intensity (lb/MWhr)</b> | 0.029 | <b>N2O Intensity (lb/MWhr)</b>   | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The number of units based on number of beds in existing Lodge to be removed. The estimated lot acreage and building area from project description and plans.

Construction Phase -

Vehicle Trips - traffic study description of CIA internal transportation plan indicates 100% of transportation to class by bus, individual car to class is prohibited.

| Table Name                | Column Name       | Default Value | New Value |
|---------------------------|-------------------|---------------|-----------|
| tblLandUse                | LandUseSquareFeet | 41,000.00     | 15,682.00 |
| tblLandUse                | LotAcreage        | 2.56          | 1.25      |
| tblLandUse                | Population        | 117.00        | 41.00     |
| tblProjectCharacteristics | OperationalYear   | 2014          | 2019      |
| tblProjectCharacteristics | UrbanizationLevel | Urban         | Rural     |
| tblVehicleTrips           | HW_TL             | 12.40         | 0.00      |
| tblVehicleTrips           | WD_TR             | 6.59          | 1.00      |

## 2.0 Emissions Summary

---

**2.1 Overall Construction****Unmitigated Construction**

|       | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e    |
|-------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|---------|
| Year  | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |             |        |         |
| 2017  |         |     |    |     |               |              |            |                |               |             |          |           | 23.3232   | 5.7100e-003 | 0.0000 | 23.4431 |
| Total |         |     |    |     |               |              |            |                |               |             |          |           | 23.3232   | 5.7100e-003 | 0.0000 | 23.4431 |

**Mitigated Construction**

|       | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e    |
|-------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|---------|
| Year  | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |             |        |         |
| 2017  |         |     |    |     |               |              |            |                |               |             |          |           | 23.3232   | 5.7100e-003 | 0.0000 | 23.4431 |
| Total |         |     |    |     |               |              |            |                |               |             |          |           | 23.3232   | 5.7100e-003 | 0.0000 | 23.4431 |

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 0.00         | 0.00       | 0.00           | 0.00          | 0.00        | 0.00     | 0.00      | 0.00      | 0.00 | 0.00 | 0.00 |

**2.2 Overall Operational****Unmitigated Operational**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2       | CH4           | N2O                | CO2e            |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------------|---------------|--------------------|-----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                 |               |                    |                 |
| Area         |         |     |    |     |               |              |            |                |               |             |          |           | 3.0387          | 5.4100e-003   | 6.0000e-005        | 3.1697          |
| Energy       |         |     |    |     |               |              |            |                |               |             |          |           | 67.5021         | 2.4400e-003   | 8.4000e-004        | 67.8147         |
| Mobile       |         |     |    |     |               |              |            |                |               |             |          |           | 50.6476         | 2.0900e-003   | 0.0000             | 50.6914         |
| Waste        |         |     |    |     |               |              |            |                |               |             |          |           | 3.8284          | 0.2263        | 0.0000             | 8.5797          |
| Water        |         |     |    |     |               |              |            |                |               |             |          |           | 6.7672          | 0.0873        | 2.1100e-003        | 9.2551          |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>131.7840</b> | <b>0.3235</b> | <b>3.0100e-003</b> | <b>139.5105</b> |

**2.2 Overall Operational****Mitigated Operational**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2       | CH4           | N2O                | CO2e            |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------------|---------------|--------------------|-----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                 |               |                    |                 |
| Area         |         |     |    |     |               |              |            |                |               |             |          |           | 3.0387          | 5.4100e-003   | 6.0000e-005        | 3.1697          |
| Energy       |         |     |    |     |               |              |            |                |               |             |          |           | 67.5021         | 2.4400e-003   | 8.4000e-004        | 67.8147         |
| Mobile       |         |     |    |     |               |              |            |                |               |             |          |           | 50.6476         | 2.0900e-003   | 0.0000             | 50.6914         |
| Waste        |         |     |    |     |               |              |            |                |               |             |          |           | 3.8284          | 0.2263        | 0.0000             | 8.5797          |
| Water        |         |     |    |     |               |              |            |                |               |             |          |           | 6.7672          | 0.0873        | 2.1100e-003        | 9.2537          |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>131.7840</b> | <b>0.3235</b> | <b>3.0100e-003</b> | <b>139.5092</b> |

|                          | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|--------------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| <b>Percent Reduction</b> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 0.00         | 0.00       | 0.00           | 0.00          | 0.00        | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

**3.0 Construction Detail****Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date  | Num Days Week | Num Days | Phase Description |
|--------------|------------|------------|------------|-----------|---------------|----------|-------------------|
| 1            | Demolition | Demolition | 1/1/2017   | 1/27/2017 | 5             | 20       |                   |

Acres of Grading (Site Preparation Phase): 0

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

| Phase Name | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|------------|---------------------------|--------|-------------|-------------|-------------|
| Demolition | Concrete/Industrial Saws  | 1      | 8.00        | 81          | 0.73        |
| Demolition | Rubber Tired Dozers       | 1      | 8.00        | 255         | 0.40        |
| Demolition | Tractors/Loaders/Backhoes | 3      | 8.00        | 97          | 0.37        |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Demolition | 5                       | 13.00              | 0.00               | 0.00                | 12.40              | 6.60               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**



**3.2 Demolition - 2017****Unmitigated Construction On-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                |                    |               |                |
| Off-Road     |         |     |    |     |               |              |            |                |               |             |          |           | 22.2938        | 5.6600e-003        | 0.0000        | 22.4126        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>22.2938</b> | <b>5.6600e-003</b> | <b>0.0000</b> | <b>22.4126</b> |

**Unmitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 1.0294        | 5.0000e-005        | 0.0000        | 1.0305        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>1.0294</b> | <b>5.0000e-005</b> | <b>0.0000</b> | <b>1.0305</b> |

**3.2 Demolition - 2017****Mitigated Construction On-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                |                    |               |                |
| Off-Road     |         |     |    |     |               |              |            |                |               |             |          |           | 22.2938        | 5.6600e-003        | 0.0000        | 22.4125        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>22.2938</b> | <b>5.6600e-003</b> | <b>0.0000</b> | <b>22.4125</b> |

**Mitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 1.0294        | 5.0000e-005        | 0.0000        | 1.0305        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>1.0294</b> | <b>5.0000e-005</b> | <b>0.0000</b> | <b>1.0305</b> |

**4.0 Operational Detail - Mobile**

#### 4.1 Mitigation Measures Mobile

|             | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e    |
|-------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|---------|
| Category    | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |             |        |         |
| Mitigated   |         |     |    |     |               |              |            |                |               |             |          |           | 50.6476   | 2.0900e-003 | 0.0000 | 50.6914 |
| Unmitigated |         |     |    |     |               |              |            |                |               |             |          |           | 50.6476   | 2.0900e-003 | 0.0000 | 50.6914 |

#### 4.2 Trip Summary Information

| Land Use            | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|---------------------|-------------------------|----------|--------|-------------|------------|
|                     | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Apartments Low Rise | 41.00                   | 293.56   | 248.87 | 126,726     | 126,726    |
| Total               | 41.00                   | 293.56   | 248.87 | 126,726     | 126,726    |

#### 4.3 Trip Type Information

| Land Use            | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|---------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                     | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Apartments Low Rise | 0.00       | 4.30       | 5.40        | 26.10      | 29.10      | 44.80       | 86             | 11       | 3       |

| LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0.546556 | 0.063101 | 0.174427 | 0.122200 | 0.033877 | 0.004835 | 0.015546 | 0.025040 | 0.002093 | 0.003260 | 0.006731 | 0.000667 | 0.001666 |

#### 5.0 Energy Detail

##### 4.4 Fleet Mix

Historical Energy Use: N

## 5.1 Mitigation Measures Energy

|                         | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e    |
|-------------------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|---------|
| Category                | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |             |             |         |
| Electricity Mitigated   |         |     |    |     |               |              |            |                |               |             |          |           | 43.9131   | 1.9900e-003 | 4.1000e-004 | 44.0822 |
| Electricity Unmitigated |         |     |    |     |               |              |            |                |               |             |          |           | 43.9131   | 1.9900e-003 | 4.1000e-004 | 44.0822 |
| NaturalGas Mitigated    |         |     |    |     |               |              |            |                |               |             |          |           | 23.5890   | 4.5000e-004 | 4.3000e-004 | 23.7325 |
| NaturalGas Unmitigated  |         |     |    |     |               |              |            |                |               |             |          |           | 23.5890   | 4.5000e-004 | 4.3000e-004 | 23.7325 |

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

|                     | NaturalGas Use | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e    |
|---------------------|----------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|---------|
| Land Use            | kBTU/yr        | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |             |             |         |
| Apartments Low Rise | 442040         |         |     |    |     |               |              |            |                |               |             |          |           | 23.5890   | 4.5000e-004 | 4.3000e-004 | 23.7325 |
| Total               |                |         |     |    |     |               |              |            |                |               |             |          |           | 23.5890   | 4.5000e-004 | 4.3000e-004 | 23.7325 |

**5.2 Energy by Land Use - NaturalGas****Mitigated**

|                     | NaturalGas Use | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2      | CH4                | N2O                | CO2e           |
|---------------------|----------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|----------------|--------------------|--------------------|----------------|
| Land Use            | kBTU/yr        | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                |                    |                    |                |
| Apartments Low Rise | 442040         |         |     |    |     |               |              |            |                |               |             |          |           | 23.5890        | 4.5000e-004        | 4.3000e-004        | 23.7325        |
| <b>Total</b>        |                |         |     |    |     |               |              |            |                |               |             |          |           | <b>23.5890</b> | <b>4.5000e-004</b> | <b>4.3000e-004</b> | <b>23.7325</b> |

**5.3 Energy by Land Use - Electricity****Unmitigated**

|                     | Electricity Use | Total CO2      | CH4                | N2O                | CO2e           |
|---------------------|-----------------|----------------|--------------------|--------------------|----------------|
| Land Use            | kWh/yr          | MT/yr          |                    |                    |                |
| Apartments Low Rise | 150950          | 43.9131        | 1.9900e-003        | 4.1000e-004        | 44.0822        |
| <b>Total</b>        |                 | <b>43.9131</b> | <b>1.9900e-003</b> | <b>4.1000e-004</b> | <b>44.0822</b> |

### 5.3 Energy by Land Use - Electricity

#### Mitigated

|                     | Electricity Use | Total CO2      | CH4                | N2O                | CO2e           |
|---------------------|-----------------|----------------|--------------------|--------------------|----------------|
| Land Use            | kWh/yr          | MT/yr          |                    |                    |                |
| Apartments Low Rise | 150950          | 43.9131        | 1.9900e-003        | 4.1000e-004        | 44.0822        |
| <b>Total</b>        |                 | <b>43.9131</b> | <b>1.9900e-003</b> | <b>4.1000e-004</b> | <b>44.0822</b> |

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

|             | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e   |
|-------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|--------|
| Category    | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |             |             |        |
| Mitigated   |         |     |    |     |               |              |            |                |               |             |          |           | 3.0387    | 5.4100e-003 | 6.0000e-005 | 3.1697 |
| Unmitigated |         |     |    |     |               |              |            |                |               |             |          |           | 3.0387    | 5.4100e-003 | 6.0000e-005 | 3.1697 |

**6.2 Area by SubCategory****Unmitigated**

|                       | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O                | CO2e          |
|-----------------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|--------------------|---------------|
| SubCategory           | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |                    |               |
| Architectural Coating |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Consumer Products     |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Hearth                |         |     |    |     |               |              |            |                |               |             |          |           | 2.5414        | 4.9200e-003        | 6.0000e-005        | 2.6621        |
| Landscaping           |         |     |    |     |               |              |            |                |               |             |          |           | 0.4973        | 4.9000e-004        | 0.0000             | 0.5075        |
| <b>Total</b>          |         |     |    |     |               |              |            |                |               |             |          |           | <b>3.0387</b> | <b>5.4100e-003</b> | <b>6.0000e-005</b> | <b>3.1697</b> |



## 6.2 Area by SubCategory

### Mitigated

|                       | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O                | CO2e          |
|-----------------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|--------------------|---------------|
| SubCategory           | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |                    |               |
| Consumer Products     |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Hearth                |         |     |    |     |               |              |            |                |               |             |          |           | 2.5414        | 4.9200e-003        | 6.0000e-005        | 2.6621        |
| Architectural Coating |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Landscaping           |         |     |    |     |               |              |            |                |               |             |          |           | 0.4973        | 4.9000e-004        | 0.0000             | 0.5075        |
| <b>Total</b>          |         |     |    |     |               |              |            |                |               |             |          |           | <b>3.0387</b> | <b>5.4100e-003</b> | <b>6.0000e-005</b> | <b>3.1697</b> |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

|             | Total CO2 | CH4    | N2O         | CO2e   |
|-------------|-----------|--------|-------------|--------|
| Category    | MT/yr     |        |             |        |
| Mitigated   | 6.7672    | 0.0873 | 2.1100e-003 | 9.2537 |
| Unmitigated | 6.7672    | 0.0873 | 2.1100e-003 | 9.2551 |

## 7.2 Water by Land Use

### Unmitigated

|                     | Indoor/Outdoor Use | Total CO2     | CH4           | N2O                | CO2e          |
|---------------------|--------------------|---------------|---------------|--------------------|---------------|
| Land Use            | Mgal               | MT/yr         |               |                    |               |
| Apartments Low Rise | 2.67132 / 1.68409  | 6.7672        | 0.0873        | 2.1100e-003        | 9.2551        |
| <b>Total</b>        |                    | <b>6.7672</b> | <b>0.0873</b> | <b>2.1100e-003</b> | <b>9.2551</b> |

### Mitigated

|                     | Indoor/Outdoor Use | Total CO2     | CH4           | N2O                | CO2e          |
|---------------------|--------------------|---------------|---------------|--------------------|---------------|
| Land Use            | Mgal               | MT/yr         |               |                    |               |
| Apartments Low Rise | 2.67132 / 1.68409  | 6.7672        | 0.0873        | 2.1100e-003        | 9.2537        |
| <b>Total</b>        |                    | <b>6.7672</b> | <b>0.0873</b> | <b>2.1100e-003</b> | <b>9.2537</b> |

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

**Category/Year**

|             | Total CO2 | CH4    | N2O    | CO2e   |
|-------------|-----------|--------|--------|--------|
|             | MT/yr     |        |        |        |
| Unmitigated | 3.8284    | 0.2263 | 0.0000 | 8.5797 |
| Mitigated   | 3.8284    | 0.2263 | 0.0000 | 8.5797 |

**8.2 Waste by Land Use****Unmitigated**

|                     | Waste Disposed | Total CO2     | CH4           | N2O           | CO2e          |
|---------------------|----------------|---------------|---------------|---------------|---------------|
| Land Use            | tons           | MT/yr         |               |               |               |
| Apartments Low Rise | 18.86          | 3.8284        | 0.2263        | 0.0000        | 8.5797        |
| <b>Total</b>        |                | <b>3.8284</b> | <b>0.2263</b> | <b>0.0000</b> | <b>8.5797</b> |

**8.2 Waste by Land Use****Mitigated**

|                        | Waste<br>Disposed | Total CO2     | CH4           | N2O           | CO2e          |
|------------------------|-------------------|---------------|---------------|---------------|---------------|
| Land Use               | tons              | MT/yr         |               |               |               |
| Apartments Low<br>Rise | 18.86             | 3.8284        | 0.2263        | 0.0000        | 8.5797        |
| <b>Total</b>           |                   | <b>3.8284</b> | <b>0.2263</b> | <b>0.0000</b> | <b>8.5797</b> |

**9.0 Operational Offroad**

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| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

**10.0 Vegetation**

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**Culinary Institute of America 830 Pratt St Helena Phase 1**  
**Bay Area AQMD Air District, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses           | Size  | Metric        | Lot Acreage | Floor Surface Area | Population |
|---------------------|-------|---------------|-------------|--------------------|------------|
| Apartments Mid Rise | 39.00 | Dwelling Unit | 1.25        | 17,885.00          | 70         |

### 1.2 Other Project Characteristics

|                                |                                |                                |       |                                  |       |
|--------------------------------|--------------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Rural                          | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 64    |
| <b>Climate Zone</b>            | 4                              | <b>Operational Year</b>        | 2018  |                                  |       |
| <b>Utility Company</b>         | Pacific Gas & Electric Company |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 641.35                         | <b>CH4 Intensity (lb/MWhr)</b> | 0.029 | <b>N2O Intensity (lb/MWhr)</b>   | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The number of dwelling units based on 39 rooms totalling 67 beds. Lot acreage = 50% of total (2.5 acres)

Construction Phase -

Vehicle Trips - traffic study description of CIA internal transportation plan indicates 100% of transportation to class by bus, individual car to class is prohibited.

| Table Name                | Column Name                | Default Value | New Value |
|---------------------------|----------------------------|---------------|-----------|
| tblArchitecturalCoating   | EF_Nonresidential_Exterior | 150.00        | 250.00    |
| tblArchitecturalCoating   | EF_Nonresidential_Interior | 100.00        | 250.00    |
| tblArchitecturalCoating   | EF_Residential_Exterior    | 150.00        | 250.00    |
| tblArchitecturalCoating   | EF_Residential_Interior    | 100.00        | 250.00    |
| tblLandUse                | LandUseSquareFeet          | 39,000.00     | 17,885.00 |
| tblLandUse                | LotAcreage                 | 1.03          | 1.25      |
| tblLandUse                | Population                 | 112.00        | 70.00     |
| tblProjectCharacteristics | OperationalYear            | 2014          | 2018      |
| tblProjectCharacteristics | UrbanizationLevel          | Urban         | Rural     |
| tblVehicleTrips           | HW_TL                      | 12.40         | 1.00      |
| tblVehicleTrips           | WD_TR                      | 6.59          | 1.00      |

## 2.0 Emissions Summary

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**2.1 Overall Construction****Unmitigated Construction**

|       | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e     |
|-------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Year  | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |        |        |          |
| 2017  |         |     |    |     |               |              |            |                |               |             |          |           | 226.9997  | 0.0433 | 0.0000 | 227.9080 |
| Total |         |     |    |     |               |              |            |                |               |             |          |           | 226.9997  | 0.0433 | 0.0000 | 227.9080 |

**Mitigated Construction**

|       | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e     |
|-------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Year  | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |        |        |          |
| 2017  |         |     |    |     |               |              |            |                |               |             |          |           | 226.9994  | 0.0433 | 0.0000 | 227.9077 |
| Total |         |     |    |     |               |              |            |                |               |             |          |           | 226.9994  | 0.0433 | 0.0000 | 227.9077 |

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 0.00         | 0.00       | 0.00           | 0.00          | 0.00        | 0.00     | 0.00      | 0.00      | 0.00 | 0.00 | 0.00 |



**2.2 Overall Operational****Unmitigated Operational**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2       | CH4           | N2O                | CO2e            |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------------|---------------|--------------------|-----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                 |               |                    |                 |
| Area         |         |     |    |     |               |              |            |                |               |             |          |           | 2.8905          | 5.1500e-003   | 5.0000e-005        | 3.0151          |
| Energy       |         |     |    |     |               |              |            |                |               |             |          |           | 56.9259         | 2.1300e-003   | 6.8000e-004        | 57.1828         |
| Mobile       |         |     |    |     |               |              |            |                |               |             |          |           | 52.9556         | 2.2500e-003   | 0.0000             | 53.0029         |
| Waste        |         |     |    |     |               |              |            |                |               |             |          |           | 3.6417          | 0.2152        | 0.0000             | 8.1612          |
| Water        |         |     |    |     |               |              |            |                |               |             |          |           | 6.4371          | 0.0831        | 2.0100e-003        | 8.8036          |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>122.8507</b> | <b>0.3078</b> | <b>2.7400e-003</b> | <b>130.1657</b> |

## 2.2 Overall Operational

### Mitigated Operational

|          | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e     |
|----------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|----------|
| Category | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |             |             |          |
| Area     |         |     |    |     |               |              |            |                |               |             |          |           | 2.8905    | 5.1500e-003 | 5.0000e-005 | 3.0151   |
| Energy   |         |     |    |     |               |              |            |                |               |             |          |           | 56.9259   | 2.1300e-003 | 6.8000e-004 | 57.1828  |
| Mobile   |         |     |    |     |               |              |            |                |               |             |          |           | 52.9556   | 2.2500e-003 | 0.0000      | 53.0029  |
| Waste    |         |     |    |     |               |              |            |                |               |             |          |           | 3.6417    | 0.2152      | 0.0000      | 8.1612   |
| Water    |         |     |    |     |               |              |            |                |               |             |          |           | 6.4371    | 0.0830      | 2.0000e-003 | 8.8023   |
| Total    |         |     |    |     |               |              |            |                |               |             |          |           | 122.8507  | 0.3078      | 2.7300e-003 | 130.1644 |

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 0.00         | 0.00       | 0.00           | 0.00          | 0.00        | 0.00     | 0.00     | 0.00      | 0.00 | 0.36 | 0.00 |

## 3.0 Construction Detail

### Construction Phase

| Phase Number | Phase Name            | Phase Type            | Start Date | End Date   | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|------------|---------------|----------|-------------------|
| 1            | Site Preparation      | Site Preparation      | 1/1/2017   | 1/3/2017   | 5             | 2        |                   |
| 2            | Grading               | Grading               | 1/4/2017   | 1/9/2017   | 5             | 4        |                   |
| 3            | Building Construction | Building Construction | 1/10/2017  | 10/16/2017 | 5             | 200      |                   |
| 4            | Paving                | Paving                | 10/17/2017 | 10/30/2017 | 5             | 10       |                   |
| 5            | Architectural Coating | Architectural Coating | 10/31/2017 | 11/13/2017 | 5             | 10       |                   |

**Acres of Grading (Site Preparation Phase): 1**

**Acres of Grading (Grading Phase): 1.5**

**Acres of Paving: 0**

**Residential Indoor: 36,217; Residential Outdoor: 12,072; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

| Phase Name            | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Site Preparation      | Graders                   | 1      | 8.00        | 174         | 0.41        |
| Site Preparation      | Rubber Tired Dozers       | 1      | 7.00        | 255         | 0.40        |
| Site Preparation      | Tractors/Loaders/Backhoes | 1      | 8.00        | 97          | 0.37        |
| Grading               | Graders                   | 1      | 6.00        | 174         | 0.41        |
| Grading               | Rubber Tired Dozers       | 1      | 6.00        | 255         | 0.40        |
| Grading               | Tractors/Loaders/Backhoes | 1      | 7.00        | 97          | 0.37        |
| Building Construction | Cranes                    | 1      | 6.00        | 226         | 0.29        |
| Building Construction | Forklifts                 | 1      | 6.00        | 89          | 0.20        |
| Building Construction | Generator Sets            | 1      | 8.00        | 84          | 0.74        |
| Building Construction | Tractors/Loaders/Backhoes | 1      | 6.00        | 97          | 0.37        |
| Building Construction | Welders                   | 3      | 8.00        | 46          | 0.45        |
| Paving                | Cement and Mortar Mixers  | 1      | 6.00        | 9           | 0.56        |
| Paving                | Pavers                    | 1      | 6.00        | 125         | 0.42        |
| Paving                | Paving Equipment          | 1      | 8.00        | 130         | 0.36        |
| Paving                | Rollers                   | 1      | 7.00        | 80          | 0.38        |
| Paving                | Tractors/Loaders/Backhoes | 1      | 8.00        | 97          | 0.37        |
| Architectural Coating | Air Compressors           | 1      | 6.00        | 78          | 0.48        |

**Trips and VMT**

| Phase Name            | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Site Preparation      | 3                       | 8.00               | 0.00               | 0.00                | 12.40              | 6.60               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 3                       | 8.00               | 0.00               | 0.00                | 12.40              | 6.60               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 7                       | 28.00              | 4.00               | 0.00                | 12.40              | 6.60               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 5                       | 13.00              | 0.00               | 0.00                | 12.40              | 6.60               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Architectural Coating | 1                       | 6.00               | 0.00               | 0.00                | 12.40              | 6.60               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

### 3.1 Mitigation Measures Construction

### 3.2 Site Preparation - 2017

#### Unmitigated Construction On-Site

|               | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Fugitive Dust |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      |         |     |    |     |               |              |            |                |               |             |          |           | 1.5895        | 4.9000e-004        | 0.0000        | 1.5997        |
| <b>Total</b>  |         |     |    |     |               |              |            |                |               |             |          |           | <b>1.5895</b> | <b>4.9000e-004</b> | <b>0.0000</b> | <b>1.5997</b> |

#### Unmitigated Construction Off-Site

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|---------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |               |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0634        | 0.0000        | 0.0000        | 0.0634        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>0.0634</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0634</b> |

**3.2 Site Preparation - 2017****Mitigated Construction On-Site**

|               | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Fugitive Dust |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      |         |     |    |     |               |              |            |                |               |             |          |           | 1.5895        | 4.9000e-004        | 0.0000        | 1.5997        |
| <b>Total</b>  |         |     |    |     |               |              |            |                |               |             |          |           | <b>1.5895</b> | <b>4.9000e-004</b> | <b>0.0000</b> | <b>1.5997</b> |

**Mitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|---------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |               |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0634        | 0.0000        | 0.0000        | 0.0634        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>0.0634</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0634</b> |

**3.3 Grading - 2017****Unmitigated Construction On-Site**

|               | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Fugitive Dust |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      |         |     |    |     |               |              |            |                |               |             |          |           | 2.6112        | 8.0000e-004        | 0.0000        | 2.6280        |
| <b>Total</b>  |         |     |    |     |               |              |            |                |               |             |          |           | <b>2.6112</b> | <b>8.0000e-004</b> | <b>0.0000</b> | <b>2.6280</b> |

**Unmitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 0.1267        | 1.0000e-005        | 0.0000        | 0.1268        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>0.1267</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>0.1268</b> |



**3.3 Grading - 2017****Mitigated Construction On-Site**

|               | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Fugitive Dust |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      |         |     |    |     |               |              |            |                |               |             |          |           | 2.6112        | 8.0000e-004        | 0.0000        | 2.6280        |
| <b>Total</b>  |         |     |    |     |               |              |            |                |               |             |          |           | <b>2.6112</b> | <b>8.0000e-004</b> | <b>0.0000</b> | <b>2.6280</b> |

**Mitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 0.1267        | 1.0000e-005        | 0.0000        | 0.1268        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>0.1267</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>0.1268</b> |

**3.4 Building Construction - 2017****Unmitigated Construction On-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------------|---------------|---------------|-----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                 |               |               |                 |
| Off-Road     |         |     |    |     |               |              |            |                |               |             |          |           | 184.5473        | 0.0387        | 0.0000        | 185.3605        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>184.5473</b> | <b>0.0387</b> | <b>0.0000</b> | <b>185.3605</b> |

**Unmitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                |                    |               |                |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 7.7482         | 6.0000e-005        | 0.0000        | 7.7495         |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 22.1717        | 1.1600e-003        | 0.0000        | 22.1960        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>29.9198</b> | <b>1.2200e-003</b> | <b>0.0000</b> | <b>29.9455</b> |

**3.4 Building Construction - 2017****Mitigated Construction On-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------------|---------------|---------------|-----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                 |               |               |                 |
| Off-Road     |         |     |    |     |               |              |            |                |               |             |          |           | 184.5471        | 0.0387        | 0.0000        | 185.3603        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>184.5471</b> | <b>0.0387</b> | <b>0.0000</b> | <b>185.3603</b> |

**Mitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                |                    |               |                |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 7.7482         | 6.0000e-005        | 0.0000        | 7.7495         |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 22.1717        | 1.1600e-003        | 0.0000        | 22.1960        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>29.9198</b> | <b>1.2200e-003</b> | <b>0.0000</b> | <b>29.9455</b> |

**3.5 Paving - 2017****Unmitigated Construction On-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Off-Road     |         |     |    |     |               |              |            |                |               |             |          |           | 6.1129        | 1.8400e-003        | 0.0000        | 6.1515        |
| Paving       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>6.1129</b> | <b>1.8400e-003</b> | <b>0.0000</b> | <b>6.1515</b> |

**Unmitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 0.5147        | 3.0000e-005        | 0.0000        | 0.5153        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>0.5147</b> | <b>3.0000e-005</b> | <b>0.0000</b> | <b>0.5153</b> |

**3.5 Paving - 2017****Mitigated Construction On-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Off-Road     |         |     |    |     |               |              |            |                |               |             |          |           | 6.1129        | 1.8400e-003        | 0.0000        | 6.1515        |
| Paving       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>6.1129</b> | <b>1.8400e-003</b> | <b>0.0000</b> | <b>6.1515</b> |

**Mitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 0.5147        | 3.0000e-005        | 0.0000        | 0.5153        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>0.5147</b> | <b>3.0000e-005</b> | <b>0.0000</b> | <b>0.5153</b> |

**3.6 Architectural Coating - 2017****Unmitigated Construction On-Site**

|                 | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|-----------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category        | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Archit. Coating |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road        |         |     |    |     |               |              |            |                |               |             |          |           | 1.2766        | 1.3000e-004        | 0.0000        | 1.2795        |
| <b>Total</b>    |         |     |    |     |               |              |            |                |               |             |          |           | <b>1.2766</b> | <b>1.3000e-004</b> | <b>0.0000</b> | <b>1.2795</b> |

**Unmitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 0.2376        | 1.0000e-005        | 0.0000        | 0.2378        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>0.2376</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>0.2378</b> |

**3.6 Architectural Coating - 2017****Mitigated Construction On-Site**

|                 | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|-----------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category        | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Archit. Coating |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road        |         |     |    |     |               |              |            |                |               |             |          |           | 1.2766        | 1.3000e-004        | 0.0000        | 1.2795        |
| <b>Total</b>    |         |     |    |     |               |              |            |                |               |             |          |           | <b>1.2766</b> | <b>1.3000e-004</b> | <b>0.0000</b> | <b>1.2795</b> |

**Mitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 0.2376        | 1.0000e-005        | 0.0000        | 0.2378        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>0.2376</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>0.2378</b> |

**4.0 Operational Detail - Mobile**



#### 4.1 Mitigation Measures Mobile

|             | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e    |
|-------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|---------|
| Category    | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |             |        |         |
| Mitigated   |         |     |    |     |               |              |            |                |               |             |          |           | 52.9556   | 2.2500e-003 | 0.0000 | 53.0029 |
| Unmitigated |         |     |    |     |               |              |            |                |               |             |          |           | 52.9556   | 2.2500e-003 | 0.0000 | 53.0029 |

#### 4.2 Trip Summary Information

| Land Use            | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|---------------------|-------------------------|----------|--------|-------------|------------|
|                     | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Apartments Mid Rise | 39.00                   | 279.24   | 236.73 | 129,108     | 129,108    |
| Total               | 39.00                   | 279.24   | 236.73 | 129,108     | 129,108    |

#### 4.3 Trip Type Information

| Land Use            | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|---------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                     | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Apartments Mid Rise | 1.00       | 4.30       | 5.40        | 26.10      | 29.10      | 44.80       | 86             | 11       | 3       |

| LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0.546229 | 0.063048 | 0.174586 | 0.122573 | 0.033968 | 0.004845 | 0.015596 | 0.024745 | 0.002089 | 0.003270 | 0.006707 | 0.000678 | 0.001667 |

#### 5.0 Energy Detail

##### 4.4 Fleet Mix

Historical Energy Use: N

## 5.1 Mitigation Measures Energy

|                         | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e    |
|-------------------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|---------|
| Category                | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |             |             |         |
| Electricity Mitigated   |         |     |    |     |               |              |            |                |               |             |          |           | 40.0108   | 1.8100e-003 | 3.7000e-004 | 40.1648 |
| Electricity Unmitigated |         |     |    |     |               |              |            |                |               |             |          |           | 40.0108   | 1.8100e-003 | 3.7000e-004 | 40.1648 |
| NaturalGas Mitigated    |         |     |    |     |               |              |            |                |               |             |          |           | 16.9151   | 3.2000e-004 | 3.1000e-004 | 17.0181 |
| NaturalGas Unmitigated  |         |     |    |     |               |              |            |                |               |             |          |           | 16.9151   | 3.2000e-004 | 3.1000e-004 | 17.0181 |

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

|                     | NaturalGas Use | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e    |
|---------------------|----------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|---------|
| Land Use            | kBTU/yr        | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |             |             |         |
| Apartments Mid Rise | 316977         |         |     |    |     |               |              |            |                |               |             |          |           | 16.9151   | 3.2000e-004 | 3.1000e-004 | 17.0181 |
| Total               |                |         |     |    |     |               |              |            |                |               |             |          |           | 16.9151   | 3.2000e-004 | 3.1000e-004 | 17.0181 |

**5.2 Energy by Land Use - NaturalGas****Mitigated**

|                     | NaturalGas Use | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2      | CH4                | N2O                | CO2e           |
|---------------------|----------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|----------------|--------------------|--------------------|----------------|
| Land Use            | kBTU/yr        | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                |                    |                    |                |
| Apartments Mid Rise | 316977         |         |     |    |     |               |              |            |                |               |             |          |           | 16.9151        | 3.2000e-004        | 3.1000e-004        | 17.0181        |
| <b>Total</b>        |                |         |     |    |     |               |              |            |                |               |             |          |           | <b>16.9151</b> | <b>3.2000e-004</b> | <b>3.1000e-004</b> | <b>17.0181</b> |

**5.3 Energy by Land Use - Electricity****Unmitigated**

|                     | Electricity Use | Total CO2      | CH4                | N2O                | CO2e           |
|---------------------|-----------------|----------------|--------------------|--------------------|----------------|
| Land Use            | kWh/yr          | MT/yr          |                    |                    |                |
| Apartments Mid Rise | 137536          | 40.0108        | 1.8100e-003        | 3.7000e-004        | 40.1648        |
| <b>Total</b>        |                 | <b>40.0108</b> | <b>1.8100e-003</b> | <b>3.7000e-004</b> | <b>40.1648</b> |

### 5.3 Energy by Land Use - Electricity

#### Mitigated

|                     | Electricity Use | Total CO2      | CH4                | N2O                | CO2e           |
|---------------------|-----------------|----------------|--------------------|--------------------|----------------|
| Land Use            | kWh/yr          | MT/yr          |                    |                    |                |
| Apartments Mid Rise | 137536          | 40.0108        | 1.8100e-003        | 3.7000e-004        | 40.1648        |
| <b>Total</b>        |                 | <b>40.0108</b> | <b>1.8100e-003</b> | <b>3.7000e-004</b> | <b>40.1648</b> |

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

|             | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e   |
|-------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|--------|
| Category    | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |             |             |        |
| Mitigated   |         |     |    |     |               |              |            |                |               |             |          |           | 2.8905    | 5.1500e-003 | 5.0000e-005 | 3.0151 |
| Unmitigated |         |     |    |     |               |              |            |                |               |             |          |           | 2.8905    | 5.1500e-003 | 5.0000e-005 | 3.0151 |

**6.2 Area by SubCategory****Unmitigated**

|                       | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O                | CO2e          |
|-----------------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|--------------------|---------------|
| SubCategory           | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |                    |               |
| Architectural Coating |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Consumer Products     |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Hearth                |         |     |    |     |               |              |            |                |               |             |          |           | 2.4175        | 4.6800e-003        | 5.0000e-005        | 2.5323        |
| Landscaping           |         |     |    |     |               |              |            |                |               |             |          |           | 0.4730        | 4.7000e-004        | 0.0000             | 0.4829        |
| <b>Total</b>          |         |     |    |     |               |              |            |                |               |             |          |           | <b>2.8905</b> | <b>5.1500e-003</b> | <b>5.0000e-005</b> | <b>3.0152</b> |

## 6.2 Area by SubCategory

### Mitigated

|                       | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O                | CO2e          |
|-----------------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|--------------------|---------------|
| SubCategory           | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |                    |               |
| Architectural Coating |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Consumer Products     |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Hearth                |         |     |    |     |               |              |            |                |               |             |          |           | 2.4175        | 4.6800e-003        | 5.0000e-005        | 2.5323        |
| Landscaping           |         |     |    |     |               |              |            |                |               |             |          |           | 0.4730        | 4.7000e-004        | 0.0000             | 0.4829        |
| <b>Total</b>          |         |     |    |     |               |              |            |                |               |             |          |           | <b>2.8905</b> | <b>5.1500e-003</b> | <b>5.0000e-005</b> | <b>3.0152</b> |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

|             | Total CO2 | CH4    | N2O         | CO2e   |
|-------------|-----------|--------|-------------|--------|
| Category    | MT/yr     |        |             |        |
| Mitigated   | 6.4371    | 0.0830 | 2.0000e-003 | 8.8023 |
| Unmitigated | 6.4371    | 0.0831 | 2.0100e-003 | 8.8036 |

## 7.2 Water by Land Use

### Unmitigated

|                     | Indoor/Outdoor Use | Total CO2     | CH4           | N2O                | CO2e          |
|---------------------|--------------------|---------------|---------------|--------------------|---------------|
| Land Use            | Mgal               | MT/yr         |               |                    |               |
| Apartments Mid Rise | 2.54101 / 1.60194  | 6.4371        | 0.0831        | 2.0100e-003        | 8.8036        |
| <b>Total</b>        |                    | <b>6.4371</b> | <b>0.0831</b> | <b>2.0100e-003</b> | <b>8.8036</b> |

### Mitigated

|                     | Indoor/Outdoor Use | Total CO2     | CH4           | N2O                | CO2e          |
|---------------------|--------------------|---------------|---------------|--------------------|---------------|
| Land Use            | Mgal               | MT/yr         |               |                    |               |
| Apartments Mid Rise | 2.54101 / 1.60194  | 6.4371        | 0.0830        | 2.0000e-003        | 8.8023        |
| <b>Total</b>        |                    | <b>6.4371</b> | <b>0.0830</b> | <b>2.0000e-003</b> | <b>8.8023</b> |

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste



**Category/Year**

|             | Total CO2 | CH4    | N2O    | CO2e   |
|-------------|-----------|--------|--------|--------|
|             | MT/yr     |        |        |        |
| Mitigated   | 3.6417    | 0.2152 | 0.0000 | 8.1612 |
| Unmitigated | 3.6417    | 0.2152 | 0.0000 | 8.1612 |

**8.2 Waste by Land Use****Unmitigated**

|                     | Waste Disposed | Total CO2     | CH4           | N2O           | CO2e          |
|---------------------|----------------|---------------|---------------|---------------|---------------|
| Land Use            | tons           | MT/yr         |               |               |               |
| Apartments Mid Rise | 17.94          | 3.6417        | 0.2152        | 0.0000        | 8.1612        |
| <b>Total</b>        |                | <b>3.6417</b> | <b>0.2152</b> | <b>0.0000</b> | <b>8.1612</b> |

**8.2 Waste by Land Use****Mitigated**

|                        | Waste<br>Disposed | Total CO2     | CH4           | N2O           | CO2e          |
|------------------------|-------------------|---------------|---------------|---------------|---------------|
| Land Use               | tons              | MT/yr         |               |               |               |
| Apartments Mid<br>Rise | 17.94             | 3.6417        | 0.2152        | 0.0000        | 8.1612        |
| <b>Total</b>           |                   | <b>3.6417</b> | <b>0.2152</b> | <b>0.0000</b> | <b>8.1612</b> |

**9.0 Operational Offroad**

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| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

**10.0 Vegetation**

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**Culinary Institute of America 830 Pratt St Helena Phase 2 Midrise**  
**Bay Area AQMD Air District, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses           | Size  | Metric        | Lot Acreage | Floor Surface Area | Population |
|---------------------|-------|---------------|-------------|--------------------|------------|
| Apartments Low Rise | 28.00 | Dwelling Unit | 0.63        | 11,380.00          | 52         |

### 1.2 Other Project Characteristics

|                                 |                                |                                 |       |                                  |       |
|---------------------------------|--------------------------------|---------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>             | Rural                          | <b>Wind Speed (m/s)</b>         | 2.2   | <b>Precipitation Freq (Days)</b> | 64    |
| <b>Climate Zone</b>             | 4                              | <b>Operational Year</b>         | 2019  |                                  |       |
| <b>Utility Company</b>          | Pacific Gas & Electric Company |                                 |       |                                  |       |
| <b>CO2 Intensity (lb/MW hr)</b> | 641.35                         | <b>CH4 Intensity (lb/MW hr)</b> | 0.029 | <b>N2O Intensity (lb/MW hr)</b>  | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The number of dwelling units based on 28 rooms totalling 52 beds. Lot acreage = 25% of total (2.5 acres)=.625 acres

Construction Phase -

Vehicle Trips - traffic study description of CIA internal transportation plan indicates 100% of transportation to class by bus, individual car to class is prohibited.

| Table Name                | Column Name                | Default Value | New Value |
|---------------------------|----------------------------|---------------|-----------|
| tblArchitecturalCoating   | EF_Nonresidential_Exterior | 150.00        | 250.00    |
| tblArchitecturalCoating   | EF_Nonresidential_Interior | 100.00        | 250.00    |
| tblArchitecturalCoating   | EF_Residential_Exterior    | 150.00        | 250.00    |
| tblArchitecturalCoating   | EF_Residential_Interior    | 100.00        | 250.00    |
| tblLandUse                | LandUseSquareFeet          | 28,000.00     | 11,380.00 |
| tblLandUse                | LotAcreage                 | 1.75          | 0.63      |
| tblLandUse                | Population                 | 80.00         | 52.00     |
| tblProjectCharacteristics | OperationalYear            | 2014          | 2019      |
| tblProjectCharacteristics | UrbanizationLevel          | Urban         | Rural     |

## 2.0 Emissions Summary

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**2.1 Overall Construction****Unmitigated Construction**

|       | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e    |
|-------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|---------|
| Year  | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |        |        |         |
| 2017  |         |     |    |     |               |              |            |                |               |             |          |           | 68.5241   | 0.0177 | 0.0000 | 68.8951 |
| Total |         |     |    |     |               |              |            |                |               |             |          |           | 68.5241   | 0.0177 | 0.0000 | 68.8951 |

**Mitigated Construction**

|       | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e    |
|-------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|---------|
| Year  | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |        |        |         |
| 2017  |         |     |    |     |               |              |            |                |               |             |          |           | 68.5240   | 0.0177 | 0.0000 | 68.8950 |
| Total |         |     |    |     |               |              |            |                |               |             |          |           | 68.5240   | 0.0177 | 0.0000 | 68.8950 |

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 0.00         | 0.00       | 0.00           | 0.00          | 0.00        | 0.00     | 0.00      | 0.00      | 0.00 | 0.00 | 0.00 |

**2.2 Overall Operational****Unmitigated Operational**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2       | CH4           | N2O                | CO2e            |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------------|---------------|--------------------|-----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                 |               |                    |                 |
| Area         |         |     |    |     |               |              |            |                |               |             |          |           | 2.0752          | 3.6900e-003   | 4.0000e-005        | 2.1647          |
| Energy       |         |     |    |     |               |              |            |                |               |             |          |           | 46.0990         | 1.6600e-003   | 5.8000e-004        | 46.3125         |
| Mobile       |         |     |    |     |               |              |            |                |               |             |          |           | 159.5014        | 6.1100e-003   | 0.0000             | 159.6297        |
| Waste        |         |     |    |     |               |              |            |                |               |             |          |           | 2.6145          | 0.1545        | 0.0000             | 5.8593          |
| Water        |         |     |    |     |               |              |            |                |               |             |          |           | 4.6215          | 0.0596        | 1.4400e-003        | 6.3205          |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>214.9116</b> | <b>0.2256</b> | <b>2.0600e-003</b> | <b>220.2867</b> |

## 2.2 Overall Operational

### Mitigated Operational

|          | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e     |
|----------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|----------|
| Category | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |             |             |          |
| Area     |         |     |    |     |               |              |            |                |               |             |          |           | 2.0752    | 3.6900e-003 | 4.0000e-005 | 2.1647   |
| Energy   |         |     |    |     |               |              |            |                |               |             |          |           | 46.0990   | 1.6600e-003 | 5.8000e-004 | 46.3125  |
| Mobile   |         |     |    |     |               |              |            |                |               |             |          |           | 159.5014  | 6.1100e-003 | 0.0000      | 159.6297 |
| Waste    |         |     |    |     |               |              |            |                |               |             |          |           | 2.6145    | 0.1545      | 0.0000      | 5.8593   |
| Water    |         |     |    |     |               |              |            |                |               |             |          |           | 4.6215    | 0.0596      | 1.4400e-003 | 6.3196   |
| Total    |         |     |    |     |               |              |            |                |               |             |          |           | 214.9116  | 0.2256      | 2.0600e-003 | 220.2857 |

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 0.00         | 0.00       | 0.00           | 0.00          | 0.00        | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

## 3.0 Construction Detail

### Construction Phase



| Phase Number | Phase Name            | Phase Type            | Start Date | End Date  | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|-----------|---------------|----------|-------------------|
| 1            | Site Preparation      | Site Preparation      | 1/1/2017   | 1/2/2017  | 5             | 1        |                   |
| 2            | Grading               | Grading               | 1/3/2017   | 1/4/2017  | 5             | 2        |                   |
| 3            | Building Construction | Building Construction | 1/5/2017   | 5/24/2017 | 5             | 100      |                   |
| 4            | Paving                | Paving                | 5/25/2017  | 5/31/2017 | 5             | 5        |                   |
| 5            | Architectural Coating | Architectural Coating | 6/1/2017   | 6/7/2017  | 5             | 5        |                   |

**Acres of Grading (Site Preparation Phase): 0.5**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 23,045; Residential Outdoor: 7,682; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)**

#### OffRoad Equipment

| Phase Name            | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Site Preparation      | Graders                   | 1      | 8.00        | 174         | 0.41        |
| Site Preparation      | Tractors/Loaders/Backhoes | 1      | 8.00        | 97          | 0.37        |
| Grading               | Concrete/Industrial Saws  | 1      | 8.00        | 81          | 0.73        |
| Grading               | Rubber Tired Dozers       | 1      | 1.00        | 255         | 0.40        |
| Grading               | Tractors/Loaders/Backhoes | 2      | 6.00        | 97          | 0.37        |
| Building Construction | Cranes                    | 1      | 4.00        | 226         | 0.29        |
| Building Construction | Forklifts                 | 2      | 6.00        | 89          | 0.20        |
| Building Construction | Tractors/Loaders/Backhoes | 2      | 8.00        | 97          | 0.37        |
| Paving                | Cement and Mortar Mixers  | 4      | 6.00        | 9           | 0.56        |
| Paving                | Pavers                    | 1      | 7.00        | 125         | 0.42        |
| Paving                | Rollers                   | 1      | 7.00        | 80          | 0.38        |
| Paving                | Tractors/Loaders/Backhoes | 1      | 7.00        | 97          | 0.37        |
| Architectural Coating | Air Compressors           | 1      | 6.00        | 78          | 0.48        |

**Trips and VMT**

| Phase Name            | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Site Preparation      | 2                       | 5.00               | 0.00               | 0.00                | 12.40              | 6.60               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 4                       | 10.00              | 0.00               | 0.00                | 12.40              | 6.60               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 5                       | 20.00              | 3.00               | 0.00                | 12.40              | 6.60               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 7                       | 18.00              | 0.00               | 0.00                | 12.40              | 6.60               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Architectural Coating | 1                       | 4.00               | 0.00               | 0.00                | 12.40              | 6.60               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction****3.2 Site Preparation - 2017****Unmitigated Construction On-Site**

|               | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e   |
|---------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|--------|
| Category      | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |             |        |        |
| Fugitive Dust |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000    | 0.0000      | 0.0000 | 0.0000 |
| Off-Road      |         |     |    |     |               |              |            |                |               |             |          |           | 0.4336    | 1.3000e-004 | 0.0000 | 0.4364 |
| Total         |         |     |    |     |               |              |            |                |               |             |          |           | 0.4336    | 1.3000e-004 | 0.0000 | 0.4364 |

**3.2 Site Preparation - 2017****Unmitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|---------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |               |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0198        | 0.0000        | 0.0000        | 0.0198        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>0.0198</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0198</b> |

**Mitigated Construction On-Site**

|               | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Fugitive Dust |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      |         |     |    |     |               |              |            |                |               |             |          |           | 0.4336        | 1.3000e-004        | 0.0000        | 0.4364        |
| <b>Total</b>  |         |     |    |     |               |              |            |                |               |             |          |           | <b>0.4336</b> | <b>1.3000e-004</b> | <b>0.0000</b> | <b>0.4364</b> |

**3.2 Site Preparation - 2017****Mitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|---------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |               |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0198        | 0.0000        | 0.0000        | 0.0198        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>0.0198</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0198</b> |

**3.3 Grading - 2017****Unmitigated Construction On-Site**

|               | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Fugitive Dust |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      |         |     |    |     |               |              |            |                |               |             |          |           | 1.0739        | 2.1000e-004        | 0.0000        | 1.0784        |
| <b>Total</b>  |         |     |    |     |               |              |            |                |               |             |          |           | <b>1.0739</b> | <b>2.1000e-004</b> | <b>0.0000</b> | <b>1.0784</b> |

**3.3 Grading - 2017****Unmitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|---------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |               |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0792        | 0.0000        | 0.0000        | 0.0793        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>0.0792</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0793</b> |

**Mitigated Construction On-Site**

|               | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Fugitive Dust |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      |         |     |    |     |               |              |            |                |               |             |          |           | 1.0739        | 2.1000e-004        | 0.0000        | 1.0784        |
| <b>Total</b>  |         |     |    |     |               |              |            |                |               |             |          |           | <b>1.0739</b> | <b>2.1000e-004</b> | <b>0.0000</b> | <b>1.0784</b> |

**3.3 Grading - 2017****Mitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|---------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |               |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0792        | 0.0000        | 0.0000        | 0.0793        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>0.0792</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0793</b> |

**3.4 Building Construction - 2017****Unmitigated Construction On-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2      | CH4           | N2O           | CO2e           |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|----------------|---------------|---------------|----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                |               |               |                |
| Off-Road     |         |     |    |     |               |              |            |                |               |             |          |           | 52.5954        | 0.0161        | 0.0000        | 52.9339        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>52.5954</b> | <b>0.0161</b> | <b>0.0000</b> | <b>52.9339</b> |

**3.4 Building Construction - 2017****Unmitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                |                    |               |                |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 2.9056         | 2.0000e-005        | 0.0000        | 2.9061         |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 7.9185         | 4.1000e-004        | 0.0000        | 7.9272         |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>10.8240</b> | <b>4.3000e-004</b> | <b>0.0000</b> | <b>10.8332</b> |

**Mitigated Construction On-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2      | CH4           | N2O           | CO2e           |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|----------------|---------------|---------------|----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                |               |               |                |
| Off-Road     |         |     |    |     |               |              |            |                |               |             |          |           | 52.5954        | 0.0161        | 0.0000        | 52.9338        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>52.5954</b> | <b>0.0161</b> | <b>0.0000</b> | <b>52.9338</b> |



**3.4 Building Construction - 2017****Mitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                |                    |               |                |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 2.9056         | 2.0000e-005        | 0.0000        | 2.9061         |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 7.9185         | 4.1000e-004        | 0.0000        | 7.9272         |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>10.8240</b> | <b>4.3000e-004</b> | <b>0.0000</b> | <b>10.8332</b> |

**3.5 Paving - 2017****Unmitigated Construction On-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Off-Road     |         |     |    |     |               |              |            |                |               |             |          |           | 2.4243        | 6.7000e-004        | 0.0000        | 2.4384        |
| Paving       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>2.4243</b> | <b>6.7000e-004</b> | <b>0.0000</b> | <b>2.4384</b> |

**3.5 Paving - 2017****Unmitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 0.3563        | 2.0000e-005        | 0.0000        | 0.3567        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>0.3563</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>0.3567</b> |

**Mitigated Construction On-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Off-Road     |         |     |    |     |               |              |            |                |               |             |          |           | 2.4243        | 6.7000e-004        | 0.0000        | 2.4384        |
| Paving       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>2.4243</b> | <b>6.7000e-004</b> | <b>0.0000</b> | <b>2.4384</b> |

**3.5 Paving - 2017****Mitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 0.3563        | 2.0000e-005        | 0.0000        | 0.3567        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>0.3563</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>0.3567</b> |

**3.6 Architectural Coating - 2017****Unmitigated Construction On-Site**

|                 | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|-----------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category        | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Archit. Coating |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road        |         |     |    |     |               |              |            |                |               |             |          |           | 0.6383        | 7.0000e-005        | 0.0000        | 0.6397        |
| <b>Total</b>    |         |     |    |     |               |              |            |                |               |             |          |           | <b>0.6383</b> | <b>7.0000e-005</b> | <b>0.0000</b> | <b>0.6397</b> |

**3.6 Architectural Coating - 2017****Unmitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|---------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |               |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0792        | 0.0000        | 0.0000        | 0.0793        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>0.0792</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0793</b> |

**Mitigated Construction On-Site**

|                 | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|-----------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category        | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Archit. Coating |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road        |         |     |    |     |               |              |            |                |               |             |          |           | 0.6383        | 7.0000e-005        | 0.0000        | 0.6397        |
| <b>Total</b>    |         |     |    |     |               |              |            |                |               |             |          |           | <b>0.6383</b> | <b>7.0000e-005</b> | <b>0.0000</b> | <b>0.6397</b> |

**3.6 Architectural Coating - 2017****Mitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|---------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |               |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0792        | 0.0000        | 0.0000        | 0.0793        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>0.0792</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0793</b> |

**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

|             | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e     |
|-------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|----------|
| Category    | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |             |        |          |
| Mitigated   |         |     |    |     |               |              |            |                |               |             |          |           | 159.5014  | 6.1100e-003 | 0.0000 | 159.6297 |
| Unmitigated |         |     |    |     |               |              |            |                |               |             |          |           | 159.5014  | 6.1100e-003 | 0.0000 | 159.6297 |

**4.2 Trip Summary Information**

| Land Use            | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|---------------------|-------------------------|----------|--------|-------------|------------|
|                     | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Apartments Low Rise | 184.52                  | 200.48   | 169.96 | 412,363     | 412,363    |
| Total               | 184.52                  | 200.48   | 169.96 | 412,363     | 412,363    |

**4.3 Trip Type Information**

| Land Use            | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|---------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                     | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Apartments Low Rise | 12.40      | 4.30       | 5.40        | 26.10      | 29.10      | 44.80       | 86             | 11       | 3       |

| LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0.546556 | 0.063101 | 0.174427 | 0.122200 | 0.033877 | 0.004835 | 0.015546 | 0.025040 | 0.002093 | 0.003260 | 0.006731 | 0.000667 | 0.001666 |

**5.0 Energy Detail****5.1 Fleet Mix**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

|                         | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e    |
|-------------------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|---------|
| Category                | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |             |             |         |
| Electricity Mitigated   |         |     |    |     |               |              |            |                |               |             |          |           | 29.9895   | 1.3600e-003 | 2.8000e-004 | 30.1049 |
| Electricity Unmitigated |         |     |    |     |               |              |            |                |               |             |          |           | 29.9895   | 1.3600e-003 | 2.8000e-004 | 30.1049 |
| NaturalGas Mitigated    |         |     |    |     |               |              |            |                |               |             |          |           | 16.1095   | 3.1000e-004 | 3.0000e-004 | 16.2076 |
| NaturalGas Unmitigated  |         |     |    |     |               |              |            |                |               |             |          |           | 16.1095   | 3.1000e-004 | 3.0000e-004 | 16.2076 |

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

|                     | NaturalGas Use | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2      | CH4                | N2O                | CO2e           |
|---------------------|----------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|----------------|--------------------|--------------------|----------------|
| Land Use            | kBTU/yr        | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                |                    |                    |                |
| Apartments Low Rise | 301881         |         |     |    |     |               |              |            |                |               |             |          |           | 16.1095        | 3.1000e-004        | 3.0000e-004        | 16.2076        |
| <b>Total</b>        |                |         |     |    |     |               |              |            |                |               |             |          |           | <b>16.1095</b> | <b>3.1000e-004</b> | <b>3.0000e-004</b> | <b>16.2076</b> |



**5.2 Energy by Land Use - NaturalGas****Mitigated**

|                     | NaturalGas Use | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2      | CH4                | N2O                | CO2e           |
|---------------------|----------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|----------------|--------------------|--------------------|----------------|
| Land Use            | kBTU/yr        | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                |                    |                    |                |
| Apartments Low Rise | 301881         |         |     |    |     |               |              |            |                |               |             |          |           | 16.1095        | 3.1000e-004        | 3.0000e-004        | 16.2076        |
| <b>Total</b>        |                |         |     |    |     |               |              |            |                |               |             |          |           | <b>16.1095</b> | <b>3.1000e-004</b> | <b>3.0000e-004</b> | <b>16.2076</b> |

**5.3 Energy by Land Use - Electricity****Unmitigated**

|                     | Electricity Use | Total CO2      | CH4                | N2O                | CO2e           |
|---------------------|-----------------|----------------|--------------------|--------------------|----------------|
| Land Use            | kWh/yr          | MT/yr          |                    |                    |                |
| Apartments Low Rise | 103088          | 29.9895        | 1.3600e-003        | 2.8000e-004        | 30.1049        |
| <b>Total</b>        |                 | <b>29.9895</b> | <b>1.3600e-003</b> | <b>2.8000e-004</b> | <b>30.1049</b> |

### 5.3 Energy by Land Use - Electricity

#### Mitigated

|                     | Electricity Use | Total CO2      | CH4                | N2O                | CO2e           |
|---------------------|-----------------|----------------|--------------------|--------------------|----------------|
| Land Use            | kWh/yr          | MT/yr          |                    |                    |                |
| Apartments Low Rise | 103088          | 29.9895        | 1.3600e-003        | 2.8000e-004        | 30.1049        |
| <b>Total</b>        |                 | <b>29.9895</b> | <b>1.3600e-003</b> | <b>2.8000e-004</b> | <b>30.1049</b> |

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

|             | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e   |
|-------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|--------|
| Category    | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |             |             |        |
| Mitigated   |         |     |    |     |               |              |            |                |               |             |          |           | 2.0752    | 3.6900e-003 | 4.0000e-005 | 2.1647 |
| Unmitigated |         |     |    |     |               |              |            |                |               |             |          |           | 2.0752    | 3.6900e-003 | 4.0000e-005 | 2.1647 |

**6.2 Area by SubCategory****Unmitigated**

|                       | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O                | CO2e          |
|-----------------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|--------------------|---------------|
| SubCategory           | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |                    |               |
| Architectural Coating |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Consumer Products     |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Hearth                |         |     |    |     |               |              |            |                |               |             |          |           | 1.7356        | 3.3600e-003        | 4.0000e-005        | 1.8180        |
| Landscaping           |         |     |    |     |               |              |            |                |               |             |          |           | 0.3396        | 3.3000e-004        | 0.0000             | 0.3466        |
| <b>Total</b>          |         |     |    |     |               |              |            |                |               |             |          |           | <b>2.0752</b> | <b>3.6900e-003</b> | <b>4.0000e-005</b> | <b>2.1647</b> |

## 6.2 Area by SubCategory

### Mitigated

|                       | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O                | CO2e          |
|-----------------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|--------------------|---------------|
| SubCategory           | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |                    |               |
| Architectural Coating |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Consumer Products     |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Hearth                |         |     |    |     |               |              |            |                |               |             |          |           | 1.7356        | 3.3600e-003        | 4.0000e-005        | 1.8180        |
| Landscaping           |         |     |    |     |               |              |            |                |               |             |          |           | 0.3396        | 3.3000e-004        | 0.0000             | 0.3466        |
| <b>Total</b>          |         |     |    |     |               |              |            |                |               |             |          |           | <b>2.0752</b> | <b>3.6900e-003</b> | <b>4.0000e-005</b> | <b>2.1647</b> |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

|             | Total CO2 | CH4    | N2O         | CO2e   |
|-------------|-----------|--------|-------------|--------|
| Category    | MT/yr     |        |             |        |
| Mitigated   | 4.6215    | 0.0596 | 1.4400e-003 | 6.3196 |
| Unmitigated | 4.6215    | 0.0596 | 1.4400e-003 | 6.3205 |

## 7.2 Water by Land Use

### Unmitigated

|                     | Indoor/Outdoor Use | Total CO2     | CH4           | N2O                | CO2e          |
|---------------------|--------------------|---------------|---------------|--------------------|---------------|
| Land Use            | Mgal               | MT/yr         |               |                    |               |
| Apartments Low Rise | 1.82431 / 1.15011  | 4.6215        | 0.0596        | 1.4400e-003        | 6.3205        |
| <b>Total</b>        |                    | <b>4.6215</b> | <b>0.0596</b> | <b>1.4400e-003</b> | <b>6.3205</b> |

### Mitigated

|                     | Indoor/Outdoor Use | Total CO2     | CH4           | N2O                | CO2e          |
|---------------------|--------------------|---------------|---------------|--------------------|---------------|
| Land Use            | Mgal               | MT/yr         |               |                    |               |
| Apartments Low Rise | 1.82431 / 1.15011  | 4.6215        | 0.0596        | 1.4400e-003        | 6.3196        |
| <b>Total</b>        |                    | <b>4.6215</b> | <b>0.0596</b> | <b>1.4400e-003</b> | <b>6.3196</b> |

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

**Category/Year**

|             | Total CO2 | CH4    | N2O    | CO2e   |
|-------------|-----------|--------|--------|--------|
|             | MT/yr     |        |        |        |
| Mitigated   | 2.6145    | 0.1545 | 0.0000 | 5.8593 |
| Unmitigated | 2.6145    | 0.1545 | 0.0000 | 5.8593 |

**8.2 Waste by Land Use****Unmitigated**

|                     | Waste Disposed | Total CO2     | CH4           | N2O           | CO2e          |
|---------------------|----------------|---------------|---------------|---------------|---------------|
| Land Use            | tons           | MT/yr         |               |               |               |
| Apartments Low Rise | 12.88          | 2.6145        | 0.1545        | 0.0000        | 5.8593        |
| <b>Total</b>        |                | <b>2.6145</b> | <b>0.1545</b> | <b>0.0000</b> | <b>5.8593</b> |

**8.2 Waste by Land Use****Mitigated**

|                        | Waste<br>Disposed | Total CO2     | CH4           | N2O           | CO2e          |
|------------------------|-------------------|---------------|---------------|---------------|---------------|
| Land Use               | tons              | MT/yr         |               |               |               |
| Apartments Low<br>Rise | 12.88             | 2.6145        | 0.1545        | 0.0000        | 5.8593        |
| <b>Total</b>           |                   | <b>2.6145</b> | <b>0.1545</b> | <b>0.0000</b> | <b>5.8593</b> |

**9.0 Operational Offroad**

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| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

**10.0 Vegetation**

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**Culinary Institute of America 830 Pratt St Helena Phase 2 Low-rise**  
**Bay Area AQMD Air District, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses           | Size  | Metric        | Lot Acreage | Floor Surface Area | Population |
|---------------------|-------|---------------|-------------|--------------------|------------|
| Apartments Mid Rise | 28.00 | Dwelling Unit | 0.63        | 11,380.00          | 52         |

### 1.2 Other Project Characteristics

|                                 |                                |                                 |       |                                  |       |
|---------------------------------|--------------------------------|---------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>             | Rural                          | <b>Wind Speed (m/s)</b>         | 2.2   | <b>Precipitation Freq (Days)</b> | 64    |
| <b>Climate Zone</b>             | 4                              | <b>Operational Year</b>         | 2019  |                                  |       |
| <b>Utility Company</b>          | Pacific Gas & Electric Company |                                 |       |                                  |       |
| <b>CO2 Intensity (lb/MW hr)</b> | 641.35                         | <b>CH4 Intensity (lb/MW hr)</b> | 0.029 | <b>N2O Intensity (lb/MW hr)</b>  | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The number of dwelling units based on 28 rooms totalling 52 beds. Lot acreage = 25% of total (2.5 acres)=.625 acres

Construction Phase -

Vehicle Trips - traffic study description of CIA internal transportation plan indicates 100% of transportation to class by bus, individual car to class is prohibited.



| Table Name                | Column Name                | Default Value | New Value |
|---------------------------|----------------------------|---------------|-----------|
| tblArchitecturalCoating   | EF_Nonresidential_Exterior | 150.00        | 250.00    |
| tblArchitecturalCoating   | EF_Nonresidential_Interior | 100.00        | 250.00    |
| tblArchitecturalCoating   | EF_Residential_Exterior    | 150.00        | 250.00    |
| tblArchitecturalCoating   | EF_Residential_Interior    | 100.00        | 250.00    |
| tblLandUse                | LandUseSquareFeet          | 28,000.00     | 11,380.00 |
| tblLandUse                | LotAcreage                 | 0.74          | 0.63      |
| tblLandUse                | Population                 | 80.00         | 52.00     |
| tblProjectCharacteristics | OperationalYear            | 2014          | 2019      |
| tblProjectCharacteristics | UrbanizationLevel          | Urban         | Rural     |

## 2.0 Emissions Summary

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**2.1 Overall Construction****Unmitigated Construction**

|       | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e    |
|-------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|---------|
| Year  | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |        |        |         |
| 2017  |         |     |    |     |               |              |            |                |               |             |          |           | 68.5241   | 0.0177 | 0.0000 | 68.8951 |
| Total |         |     |    |     |               |              |            |                |               |             |          |           | 68.5241   | 0.0177 | 0.0000 | 68.8951 |

**Mitigated Construction**

|       | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e    |
|-------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|---------|
| Year  | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |        |        |         |
| 2017  |         |     |    |     |               |              |            |                |               |             |          |           | 68.5240   | 0.0177 | 0.0000 | 68.8950 |
| Total |         |     |    |     |               |              |            |                |               |             |          |           | 68.5240   | 0.0177 | 0.0000 | 68.8950 |

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 0.00         | 0.00       | 0.00           | 0.00          | 0.00        | 0.00     | 0.00      | 0.00      | 0.00 | 0.00 | 0.00 |

**2.2 Overall Operational****Unmitigated Operational**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2       | CH4           | N2O                | CO2e            |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------------|---------------|--------------------|-----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                 |               |                    |                 |
| Area         |         |     |    |     |               |              |            |                |               |             |          |           | 2.0752          | 3.6900e-003   | 4.0000e-005        | 2.1647          |
| Energy       |         |     |    |     |               |              |            |                |               |             |          |           | 40.8699         | 1.5300e-003   | 4.9000e-004        | 41.0543         |
| Mobile       |         |     |    |     |               |              |            |                |               |             |          |           | 159.5014        | 6.1100e-003   | 0.0000             | 159.6297        |
| Waste        |         |     |    |     |               |              |            |                |               |             |          |           | 2.6145          | 0.1545        | 0.0000             | 5.8593          |
| Water        |         |     |    |     |               |              |            |                |               |             |          |           | 4.6215          | 0.0596        | 1.4400e-003        | 6.3205          |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>209.6825</b> | <b>0.2255</b> | <b>1.9700e-003</b> | <b>215.0285</b> |

## 2.2 Overall Operational

### Mitigated Operational

|          | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e     |
|----------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|----------|
| Category | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |             |             |          |
| Area     |         |     |    |     |               |              |            |                |               |             |          |           | 2.0752    | 3.6900e-003 | 4.0000e-005 | 2.1647   |
| Energy   |         |     |    |     |               |              |            |                |               |             |          |           | 40.8699   | 1.5300e-003 | 4.9000e-004 | 41.0543  |
| Mobile   |         |     |    |     |               |              |            |                |               |             |          |           | 159.5014  | 6.1100e-003 | 0.0000      | 159.6297 |
| Waste    |         |     |    |     |               |              |            |                |               |             |          |           | 2.6145    | 0.1545      | 0.0000      | 5.8593   |
| Water    |         |     |    |     |               |              |            |                |               |             |          |           | 4.6215    | 0.0596      | 1.4400e-003 | 6.3196   |
| Total    |         |     |    |     |               |              |            |                |               |             |          |           | 209.6825  | 0.2255      | 1.9700e-003 | 215.0276 |

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 0.00         | 0.00       | 0.00           | 0.00          | 0.00        | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

## 3.0 Construction Detail

### Construction Phase

| Phase Number | Phase Name            | Phase Type            | Start Date | End Date  | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|-----------|---------------|----------|-------------------|
| 1            | Site Preparation      | Site Preparation      | 1/1/2017   | 1/2/2017  | 5             | 1        |                   |
| 2            | Grading               | Grading               | 1/3/2017   | 1/4/2017  | 5             | 2        |                   |
| 3            | Building Construction | Building Construction | 1/5/2017   | 5/24/2017 | 5             | 100      |                   |
| 4            | Paving                | Paving                | 5/25/2017  | 5/31/2017 | 5             | 5        |                   |
| 5            | Architectural Coating | Architectural Coating | 6/1/2017   | 6/7/2017  | 5             | 5        |                   |

**Acres of Grading (Site Preparation Phase): 0.5**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 23,045; Residential Outdoor: 7,682; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)**

#### OffRoad Equipment

| Phase Name            | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Site Preparation      | Graders                   | 1      | 8.00        | 174         | 0.41        |
| Site Preparation      | Tractors/Loaders/Backhoes | 1      | 8.00        | 97          | 0.37        |
| Grading               | Concrete/Industrial Saws  | 1      | 8.00        | 81          | 0.73        |
| Grading               | Rubber Tired Dozers       | 1      | 1.00        | 255         | 0.40        |
| Grading               | Tractors/Loaders/Backhoes | 2      | 6.00        | 97          | 0.37        |
| Building Construction | Cranes                    | 1      | 4.00        | 226         | 0.29        |
| Building Construction | Forklifts                 | 2      | 6.00        | 89          | 0.20        |
| Building Construction | Tractors/Loaders/Backhoes | 2      | 8.00        | 97          | 0.37        |
| Paving                | Cement and Mortar Mixers  | 4      | 6.00        | 9           | 0.56        |
| Paving                | Pavers                    | 1      | 7.00        | 125         | 0.42        |
| Paving                | Rollers                   | 1      | 7.00        | 80          | 0.38        |
| Paving                | Tractors/Loaders/Backhoes | 1      | 7.00        | 97          | 0.37        |
| Architectural Coating | Air Compressors           | 1      | 6.00        | 78          | 0.48        |

**Trips and VMT**

| Phase Name            | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Site Preparation      | 2                       | 5.00               | 0.00               | 0.00                | 12.40              | 6.60               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 4                       | 10.00              | 0.00               | 0.00                | 12.40              | 6.60               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 5                       | 20.00              | 3.00               | 0.00                | 12.40              | 6.60               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 7                       | 18.00              | 0.00               | 0.00                | 12.40              | 6.60               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Architectural Coating | 1                       | 4.00               | 0.00               | 0.00                | 12.40              | 6.60               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction****3.2 Site Preparation - 2017****Unmitigated Construction On-Site**

|               | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e   |
|---------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|--------|
| Category      | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |             |        |        |
| Fugitive Dust |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000    | 0.0000      | 0.0000 | 0.0000 |
| Off-Road      |         |     |    |     |               |              |            |                |               |             |          |           | 0.4336    | 1.3000e-004 | 0.0000 | 0.4364 |
| Total         |         |     |    |     |               |              |            |                |               |             |          |           | 0.4336    | 1.3000e-004 | 0.0000 | 0.4364 |

**3.2 Site Preparation - 2017****Unmitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|---------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |               |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0198        | 0.0000        | 0.0000        | 0.0198        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>0.0198</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0198</b> |

**Mitigated Construction On-Site**

|               | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Fugitive Dust |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      |         |     |    |     |               |              |            |                |               |             |          |           | 0.4336        | 1.3000e-004        | 0.0000        | 0.4364        |
| <b>Total</b>  |         |     |    |     |               |              |            |                |               |             |          |           | <b>0.4336</b> | <b>1.3000e-004</b> | <b>0.0000</b> | <b>0.4364</b> |

**3.2 Site Preparation - 2017****Mitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|---------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |               |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0198        | 0.0000        | 0.0000        | 0.0198        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>0.0198</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0198</b> |

**3.3 Grading - 2017****Unmitigated Construction On-Site**

|               | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Fugitive Dust |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      |         |     |    |     |               |              |            |                |               |             |          |           | 1.0739        | 2.1000e-004        | 0.0000        | 1.0784        |
| <b>Total</b>  |         |     |    |     |               |              |            |                |               |             |          |           | <b>1.0739</b> | <b>2.1000e-004</b> | <b>0.0000</b> | <b>1.0784</b> |



**3.3 Grading - 2017****Unmitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|---------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |               |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0792        | 0.0000        | 0.0000        | 0.0793        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>0.0792</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0793</b> |

**Mitigated Construction On-Site**

|               | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Fugitive Dust |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      |         |     |    |     |               |              |            |                |               |             |          |           | 1.0739        | 2.1000e-004        | 0.0000        | 1.0784        |
| <b>Total</b>  |         |     |    |     |               |              |            |                |               |             |          |           | <b>1.0739</b> | <b>2.1000e-004</b> | <b>0.0000</b> | <b>1.0784</b> |

**3.3 Grading - 2017****Mitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|---------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |               |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0792        | 0.0000        | 0.0000        | 0.0793        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>0.0792</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0793</b> |

**3.4 Building Construction - 2017****Unmitigated Construction On-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2      | CH4           | N2O           | CO2e           |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|----------------|---------------|---------------|----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                |               |               |                |
| Off-Road     |         |     |    |     |               |              |            |                |               |             |          |           | 52.5954        | 0.0161        | 0.0000        | 52.9339        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>52.5954</b> | <b>0.0161</b> | <b>0.0000</b> | <b>52.9339</b> |

**3.4 Building Construction - 2017****Unmitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                |                    |               |                |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 2.9056         | 2.0000e-005        | 0.0000        | 2.9061         |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 7.9185         | 4.1000e-004        | 0.0000        | 7.9272         |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>10.8240</b> | <b>4.3000e-004</b> | <b>0.0000</b> | <b>10.8332</b> |

**Mitigated Construction On-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2      | CH4           | N2O           | CO2e           |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|----------------|---------------|---------------|----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                |               |               |                |
| Off-Road     |         |     |    |     |               |              |            |                |               |             |          |           | 52.5954        | 0.0161        | 0.0000        | 52.9338        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>52.5954</b> | <b>0.0161</b> | <b>0.0000</b> | <b>52.9338</b> |

**3.4 Building Construction - 2017****Mitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                |                    |               |                |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 2.9056         | 2.0000e-005        | 0.0000        | 2.9061         |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 7.9185         | 4.1000e-004        | 0.0000        | 7.9272         |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>10.8240</b> | <b>4.3000e-004</b> | <b>0.0000</b> | <b>10.8332</b> |

**3.5 Paving - 2017****Unmitigated Construction On-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Off-Road     |         |     |    |     |               |              |            |                |               |             |          |           | 2.4243        | 6.7000e-004        | 0.0000        | 2.4384        |
| Paving       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>2.4243</b> | <b>6.7000e-004</b> | <b>0.0000</b> | <b>2.4384</b> |

**3.5 Paving - 2017****Unmitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 0.3563        | 2.0000e-005        | 0.0000        | 0.3567        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>0.3563</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>0.3567</b> |

**Mitigated Construction On-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Off-Road     |         |     |    |     |               |              |            |                |               |             |          |           | 2.4243        | 6.7000e-004        | 0.0000        | 2.4384        |
| Paving       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>2.4243</b> | <b>6.7000e-004</b> | <b>0.0000</b> | <b>2.4384</b> |

**3.5 Paving - 2017****Mitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 0.3563        | 2.0000e-005        | 0.0000        | 0.3567        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>0.3563</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>0.3567</b> |

**3.6 Architectural Coating - 2017****Unmitigated Construction On-Site**

|                 | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|-----------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category        | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Archit. Coating |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road        |         |     |    |     |               |              |            |                |               |             |          |           | 0.6383        | 7.0000e-005        | 0.0000        | 0.6397        |
| <b>Total</b>    |         |     |    |     |               |              |            |                |               |             |          |           | <b>0.6383</b> | <b>7.0000e-005</b> | <b>0.0000</b> | <b>0.6397</b> |

**3.6 Architectural Coating - 2017****Unmitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|---------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |               |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0792        | 0.0000        | 0.0000        | 0.0793        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>0.0792</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0793</b> |

**Mitigated Construction On-Site**

|                 | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|-----------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category        | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Archit. Coating |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road        |         |     |    |     |               |              |            |                |               |             |          |           | 0.6383        | 7.0000e-005        | 0.0000        | 0.6397        |
| <b>Total</b>    |         |     |    |     |               |              |            |                |               |             |          |           | <b>0.6383</b> | <b>7.0000e-005</b> | <b>0.0000</b> | <b>0.6397</b> |

**3.6 Architectural Coating - 2017****Mitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|---------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |               |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0792        | 0.0000        | 0.0000        | 0.0793        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>0.0792</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0793</b> |

**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

|             | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e     |
|-------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|----------|
| Category    | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |             |        |          |
| Mitigated   |         |     |    |     |               |              |            |                |               |             |          |           | 159.5014  | 6.1100e-003 | 0.0000 | 159.6297 |
| Unmitigated |         |     |    |     |               |              |            |                |               |             |          |           | 159.5014  | 6.1100e-003 | 0.0000 | 159.6297 |



**4.2 Trip Summary Information**

| Land Use            | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|---------------------|-------------------------|----------|--------|-------------|------------|
|                     | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Apartments Mid Rise | 184.52                  | 200.48   | 169.96 | 412,363     | 412,363    |
| Total               | 184.52                  | 200.48   | 169.96 | 412,363     | 412,363    |

**4.3 Trip Type Information**

| Land Use            | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|---------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                     | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Apartments Mid Rise | 12.40      | 4.30       | 5.40        | 26.10      | 29.10      | 44.80       | 86             | 11       | 3       |

| LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0.546556 | 0.063101 | 0.174427 | 0.122200 | 0.033877 | 0.004835 | 0.015546 | 0.025040 | 0.002093 | 0.003260 | 0.006731 | 0.000667 | 0.001666 |

**5.0 Energy Detail****5.1 Fleet Mix**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

|                         | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e    |
|-------------------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|---------|
| Category                | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |             |             |         |
| Electricity Mitigated   |         |     |    |     |               |              |            |                |               |             |          |           | 28.7257   | 1.3000e-003 | 2.7000e-004 | 28.8363 |
| Electricity Unmitigated |         |     |    |     |               |              |            |                |               |             |          |           | 28.7257   | 1.3000e-003 | 2.7000e-004 | 28.8363 |
| NaturalGas Mitigated    |         |     |    |     |               |              |            |                |               |             |          |           | 12.1442   | 2.3000e-004 | 2.2000e-004 | 12.2181 |
| NaturalGas Unmitigated  |         |     |    |     |               |              |            |                |               |             |          |           | 12.1442   | 2.3000e-004 | 2.2000e-004 | 12.2181 |

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

|                     | NaturalGas Use | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2      | CH4                | N2O                | CO2e           |
|---------------------|----------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|----------------|--------------------|--------------------|----------------|
| Land Use            | kBTU/yr        | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                |                    |                    |                |
| Apartments Mid Rise | 227573         |         |     |    |     |               |              |            |                |               |             |          |           | 12.1442        | 2.3000e-004        | 2.2000e-004        | 12.2181        |
| <b>Total</b>        |                |         |     |    |     |               |              |            |                |               |             |          |           | <b>12.1442</b> | <b>2.3000e-004</b> | <b>2.2000e-004</b> | <b>12.2181</b> |

**5.2 Energy by Land Use - NaturalGas****Mitigated**

|                     | NaturalGas Use | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2      | CH4                | N2O                | CO2e           |
|---------------------|----------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|----------------|--------------------|--------------------|----------------|
| Land Use            | kBTU/yr        | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                |                    |                    |                |
| Apartments Mid Rise | 227573         |         |     |    |     |               |              |            |                |               |             |          |           | 12.1442        | 2.3000e-004        | 2.2000e-004        | 12.2181        |
| <b>Total</b>        |                |         |     |    |     |               |              |            |                |               |             |          |           | <b>12.1442</b> | <b>2.3000e-004</b> | <b>2.2000e-004</b> | <b>12.2181</b> |

**5.3 Energy by Land Use - Electricity****Unmitigated**

|                     | Electricity Use | Total CO2      | CH4                | N2O                | CO2e           |
|---------------------|-----------------|----------------|--------------------|--------------------|----------------|
| Land Use            | kWh/yr          | MT/yr          |                    |                    |                |
| Apartments Mid Rise | 98743.7         | 28.7257        | 1.3000e-003        | 2.7000e-004        | 28.8363        |
| <b>Total</b>        |                 | <b>28.7257</b> | <b>1.3000e-003</b> | <b>2.7000e-004</b> | <b>28.8363</b> |

### 5.3 Energy by Land Use - Electricity

#### Mitigated

|                     | Electricity Use | Total CO2      | CH4                | N2O                | CO2e           |
|---------------------|-----------------|----------------|--------------------|--------------------|----------------|
| Land Use            | kWh/yr          | MT/yr          |                    |                    |                |
| Apartments Mid Rise | 98743.7         | 28.7257        | 1.3000e-003        | 2.7000e-004        | 28.8363        |
| <b>Total</b>        |                 | <b>28.7257</b> | <b>1.3000e-003</b> | <b>2.7000e-004</b> | <b>28.8363</b> |

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

|             | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e   |
|-------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|--------|
| Category    | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |             |             |        |
| Mitigated   |         |     |    |     |               |              |            |                |               |             |          |           | 2.0752    | 3.6900e-003 | 4.0000e-005 | 2.1647 |
| Unmitigated |         |     |    |     |               |              |            |                |               |             |          |           | 2.0752    | 3.6900e-003 | 4.0000e-005 | 2.1647 |

**6.2 Area by SubCategory****Unmitigated**

|                       | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O                | CO2e          |
|-----------------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|--------------------|---------------|
| SubCategory           | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |                    |               |
| Architectural Coating |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Consumer Products     |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Hearth                |         |     |    |     |               |              |            |                |               |             |          |           | 1.7356        | 3.3600e-003        | 4.0000e-005        | 1.8180        |
| Landscaping           |         |     |    |     |               |              |            |                |               |             |          |           | 0.3396        | 3.3000e-004        | 0.0000             | 0.3466        |
| <b>Total</b>          |         |     |    |     |               |              |            |                |               |             |          |           | <b>2.0752</b> | <b>3.6900e-003</b> | <b>4.0000e-005</b> | <b>2.1647</b> |

## 6.2 Area by SubCategory

### Mitigated

|                       | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O                | CO2e          |
|-----------------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|--------------------|---------------|
| SubCategory           | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |                    |               |
| Architectural Coating |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Consumer Products     |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Hearth                |         |     |    |     |               |              |            |                |               |             |          |           | 1.7356        | 3.3600e-003        | 4.0000e-005        | 1.8180        |
| Landscaping           |         |     |    |     |               |              |            |                |               |             |          |           | 0.3396        | 3.3000e-004        | 0.0000             | 0.3466        |
| <b>Total</b>          |         |     |    |     |               |              |            |                |               |             |          |           | <b>2.0752</b> | <b>3.6900e-003</b> | <b>4.0000e-005</b> | <b>2.1647</b> |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

|             | Total CO2 | CH4    | N2O         | CO2e   |
|-------------|-----------|--------|-------------|--------|
| Category    | MT/yr     |        |             |        |
| Mitigated   | 4.6215    | 0.0596 | 1.4400e-003 | 6.3196 |
| Unmitigated | 4.6215    | 0.0596 | 1.4400e-003 | 6.3205 |

## 7.2 Water by Land Use

### Unmitigated

|                     | Indoor/Outdoor Use | Total CO2     | CH4           | N2O                | CO2e          |
|---------------------|--------------------|---------------|---------------|--------------------|---------------|
| Land Use            | Mgal               | MT/yr         |               |                    |               |
| Apartments Mid Rise | 1.82431 / 1.15011  | 4.6215        | 0.0596        | 1.4400e-003        | 6.3205        |
| <b>Total</b>        |                    | <b>4.6215</b> | <b>0.0596</b> | <b>1.4400e-003</b> | <b>6.3205</b> |

### Mitigated

|                     | Indoor/Outdoor Use | Total CO2     | CH4           | N2O                | CO2e          |
|---------------------|--------------------|---------------|---------------|--------------------|---------------|
| Land Use            | Mgal               | MT/yr         |               |                    |               |
| Apartments Mid Rise | 1.82431 / 1.15011  | 4.6215        | 0.0596        | 1.4400e-003        | 6.3196        |
| <b>Total</b>        |                    | <b>4.6215</b> | <b>0.0596</b> | <b>1.4400e-003</b> | <b>6.3196</b> |

## 8.0 Waste Detail

---

### 8.1 Mitigation Measures Waste

**Category/Year**

|             | Total CO2 | CH4    | N2O    | CO2e   |
|-------------|-----------|--------|--------|--------|
|             | MT/yr     |        |        |        |
| Mitigated   | 2.6145    | 0.1545 | 0.0000 | 5.8593 |
| Unmitigated | 2.6145    | 0.1545 | 0.0000 | 5.8593 |

**8.2 Waste by Land Use****Unmitigated**

|                     | Waste Disposed | Total CO2     | CH4           | N2O           | CO2e          |
|---------------------|----------------|---------------|---------------|---------------|---------------|
| Land Use            | tons           | MT/yr         |               |               |               |
| Apartments Mid Rise | 12.88          | 2.6145        | 0.1545        | 0.0000        | 5.8593        |
| <b>Total</b>        |                | <b>2.6145</b> | <b>0.1545</b> | <b>0.0000</b> | <b>5.8593</b> |



**8.2 Waste by Land Use****Mitigated**

|                        | Waste<br>Disposed | Total CO2     | CH4           | N2O           | CO2e          |
|------------------------|-------------------|---------------|---------------|---------------|---------------|
| Land Use               | tons              | MT/yr         |               |               |               |
| Apartments Mid<br>Rise | 12.88             | 2.6145        | 0.1545        | 0.0000        | 5.8593        |
| <b>Total</b>           |                   | <b>2.6145</b> | <b>0.1545</b> | <b>0.0000</b> | <b>5.8593</b> |

**9.0 Operational Offroad**

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| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

**10.0 Vegetation**

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VII. GREENHOUSE GAS EMISSIONS --

Would the project:

| In the columns to the right place a check in the box that relates to each of the question                                        | Potentially Significant Impact | Less Than Significant with Mitigations Incorporated | Less Than Significant Impact | No Impact |
|----------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------------------------------------|------------------------------|-----------|
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?      |                                |                                                     | X                            |           |
| b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? |                                |                                                     |                              | X         |
|                                                                                                                                  |                                |                                                     |                              |           |
|                                                                                                                                  |                                |                                                     |                              |           |
|                                                                                                                                  |                                |                                                     |                              |           |
|                                                                                                                                  |                                |                                                     |                              |           |
|                                                                                                                                  |                                |                                                     |                              |           |
|                                                                                                                                  |                                |                                                     |                              |           |
|                                                                                                                                  |                                |                                                     |                              |           |
| Discussion, and any mitigations required to make any impacts less than significant                                               |                                |                                                     |                              |           |

This Environmental Checklist Form has been provided to assist in the analysis of the environmental issues associated with the project. The following standard rules, generated from the CEQA Guidelines, apply when completing and reviewing the Environmental Checklist Form:

- 1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g. the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g. the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).*
- 2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.*
- 3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.*
- 4. "Negative Declaration: Potentially Significant Unless Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section 17, "Earlier Analysis," may be cross-referenced).*
- 5. Earlier analysis may be used where an effect has been adequately analyzed in an earlier EIR or Negative Declaration. In this case, a brief discussion should identify the following:*
  - a. Earlier Analysis Used. Identify and state where they are available for review.*
  - b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.*
  - c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures, which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.*
- 6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g. general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.*
- 7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.*
- 8. This checklist is only a suggested form, and lead agencies are free to use different formats. However, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.*
- 9. The analysis of each issue should identify: (a) the significance criteria or threshold used to evaluate each question; and (b) the mitigation measure identified, if any, to reduce the impact to a level of less-than-significant.*


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## Culinary Institute of America Greystone Rehabilitation

### GHG Emissions Analysis

#### Executive Summary

This report evaluates greenhouse gas (GHG) emissions that would be generated by the Culinary Institute of America Greystone educational facility located at 2555 Main Street, St Helena, CA. This project is located in the Bay Area Air Quality Management District (BAAQMD) and the project would be subject to the BAAQMD rules and regulations. This evaluation uses the approach and methodology established by the BAAQMD for assessing GHG emissions.

The projected emissions for this project have been established using the current CalEEMod program developed for this purpose by the California Air Resources Board. Table 1 provides the greenhouse gas emissions of the project during construction and operation. The total project construction emissions 193.35 metric tons CO<sub>2</sub>e (MTCO<sub>2</sub>e). The total annual emissions after project completion is estimated to be a net increase of 114.93 MTCO<sub>2</sub>e. The emissions by year are provided below. The annual emissions from both construction and operations are below the threshold of significance for all years.

| Culinary Institute of America Greystone Rehabilitation                    |                                              |                                                          |                                       |                                          |
|---------------------------------------------------------------------------|----------------------------------------------|----------------------------------------------------------|---------------------------------------|------------------------------------------|
| Operations Unmitigate Annual GHG Emissions MTCO <sub>2</sub> e (CalEEMod) |                                              |                                                          |                                       |                                          |
| Emissions Category                                                        | No Project Analysis<br>(200 Students)<br>(A) | Project after<br>Rehabilitation<br>(320 Students)<br>(B) | Net<br>Emissions<br>Increase<br>(B-A) | Below<br>Threshold<br>of<br>Significance |
| Area                                                                      | 0.00                                         | 0.00                                                     | 114.93                                | yes                                      |
| Energy                                                                    | 109.11                                       | 109.11                                                   |                                       |                                          |
| Mobile                                                                    | 173.06                                       | 276.89                                                   |                                       |                                          |
| Waste                                                                     | 16.60                                        | 26.57                                                    |                                       |                                          |
| Water                                                                     | 1.89                                         | 3.03                                                     |                                       |                                          |
| Total 2019                                                                | 300.67                                       | 415.60                                                   | 114.93                                | yes                                      |
| Construction Emissions (CalEEMod)                                         |                                              |                                                          |                                       |                                          |
| Construction Year 2017                                                    | NA                                           | 166.34                                                   | 166.34                                | yes                                      |
| Construction Year 2018                                                    | NA                                           | 27.01                                                    | 27.01                                 | yes                                      |

Table 1: Unmitigated GHG Emissions Summary

The Bay Area Air Quality Management District (BAAQMD) has recommended value of 1,100 annual metric tons CO<sub>2</sub>e as the threshold of significance for greenhouse gas emissions. This threshold is limited to operational GHG emissions. The BAAQMD recommends using this threshold or compliance with a qualified Climate Action Plan (CAP) for evaluation of projects. If the project is part of a qualified CAP, or


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emissions are less than the threshold of significance (1,100 metric tons CO<sub>2</sub>e/yr.) it can be considered to have a less than significant GHG impact.

The increase in annual emissions of the Culinary Institute of America Greystone facility due to the Rehabilitation project is estimated to be a 114.93 MTCO<sub>2</sub>e in 2019, the first full year of operation. This value is well below the 1,100 MTCO<sub>2</sub>e threshold of significance.

### Introduction

This report evaluates the greenhouse gas (GHG) emissions that would be generated by the proposed 27,500 sqft rehabilitation of the Greystone facility. The interior renovation is anticipated to begin in January 2017 and continue for 14 months. The student capacity will increase from 200 students currently served to a maximum of 320 students. The analysis estimates the increase in operational emissions due to the expanded student capacity, and the emissions due to project construction. This GHG evaluation uses the approach and methodology established by the Bay Area Air Quality Management District (BAAQMD) for assessing GHG emissions.

### Project Description

The Culinary Institute of America Greystone rehabilitation project is located at 2555 Main Street in St. Helena, CA. The rehabilitation will affect roughly 27,500 sqft within the existing building. The projected start of construction is January 2017 with completion roughly 14 months later in March 2018. The first full year of operation is 2019.

Figure 1 provides the project regional location. Figure 2 provides a closer view of the project site at 2555 Main Street in St. Helena, CA.

### Project Construction

This project is projected to be completed in 14 months. The construction work schedule is 5 days per week.



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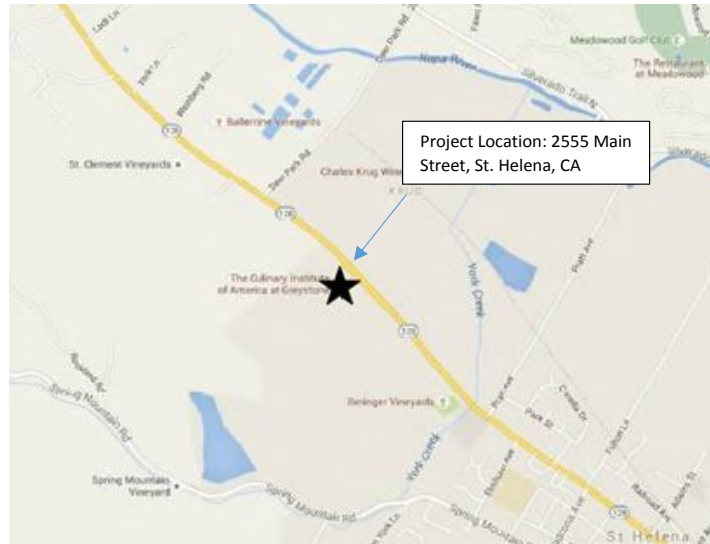


Figure 1: Project Location



Figure 2: Project Location Detail



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### **Greenhouse Gas Impact Discussion:**

This report estimates the GHG emissions of the proposed project using the California Emission Estimator Model (CALEEMod). The model report summarizes the greenhouse gases that would be generated during construction and annual operation of the project and compares the results to the threshold of significance established by BAAQMD.

### **Greenhouse Gas Threshold of Significance**

Greenhouse gases (GHGs) are generated both from natural geological and biological processes and through human activities including the combustion of fossil fuels and industrial and agricultural processes. GHGs include carbon dioxide (CO<sub>2</sub>), nitrous oxide (N<sub>2</sub>O), methane (CH<sub>4</sub>), chlorofluorocarbons, hydrofluorocarbons and perfluorocarbons. While GHGs are emitted locally they have global implications. GHGs trap heat in the atmosphere, which heats up the surface of the Earth. This concept is known as global warming and is contributing to climate change. Changing climatic conditions pose several potential adverse impacts including sea level rise, increased risk of wildfires, degraded ecological systems, deteriorated public health, and decreased water supplies.

To address GHG's at the State level, the California legislature passed the California Global Warming Solutions Act in 2006 (Assembly Bill 32), which requires that statewide GHG emissions be reduced to 1990 levels by 2020. Executive Order S-3-05 provides the California Environmental Protection Agency with the regulatory authority to coordinate the State's effort to achieve GHG reduction targets. S-3-05 goes beyond AB 32 and calls for an 80 percent reduction below 1990 levels by 2050. Senate Bill 375 has also been adopted, which seeks to curb GHGs by reducing urban sprawl and vehicle miles traveled.

The BAAQMD adopted revised CEQA Guidelines, which included thresholds of significance for greenhouse gas emissions. The Guidelines were subsequently updated in May 2011. Based on the BAAQMD Guidelines, a project is considered to have a less-than-significant impact due to GHG emissions if it:

1. Complies with an adopted Qualified GHG Reduction Strategy;
2. Emits less than 1,100 metric tons (MT) CO<sub>2</sub>e per year; or
3. Emits less than 4.6 MT CO<sub>2</sub>e per service population per year (residents and employees).

This report estimates the project GHG emissions and compares the result to the BAAQMD threshold of significance for GHG annual emissions.

### **Greenhouse Gas Impact Discussion:**

The proposed project will result in the generation and emission of GHGs during construction and operation. Construction will result in GHG emissions from worker trips, and material delivery and hauling including emissions associated with the rehabilitation demolition. Construction GHG emissions are short term and will cease once construction is complete. Although the BAAQMD has not established



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thresholds of significance for GHG emissions resulting from construction activities, BAAQMD encourages the incorporation of best management practices to reduce GHG emissions during construction.

Operation of the proposed project will result in GHG emissions from onsite lighting, heating, refrigeration and cooling of the proposed building and product, as well as the treatment and transport of water and wastewater. Additionally, GHGs from operation will result from vehicle trips associated with staff and residents transportation to and from the site. Operational GHG emissions are ongoing for the life of the project.

#### CalEEMod modeling

The results are based on the net increase of operations emissions calculated by modeling the existing 200 students and comparing the results to the emissions associated with the projected 320 student capacity after completion. The unit acre and project square feet were entered based on project area defined by use permit drawings<sup>1</sup>. The models and notations are provided in the attachments.

- 1) No Project Analysis (200 students) CalEEMod input
  - a. The project units are entered based on the number of students
  - b. The project acreage was determined based on building footprint
  - c. The project area was determined from the project use permit drawings.

| Land Use Type | Land Use Subtype     | Unit Amount | Size Metric | Lot Acreage | Square Feet | Population |
|---------------|----------------------|-------------|-------------|-------------|-------------|------------|
| Educational   | Junior College (2yr) | 200         | Student     | 0.82        | 27,500      | 0          |

- 2) Rehabilitation Project Analysis (320 students) CalEEMod input
  - a. The project units are entered based on the number of students
  - b. The project acreage was determined based on building footprint
  - c. The project area was determined from the project use permit drawings.

| Land Use Type | Land Use Subtype     | Unit Amount | Size Metric | Lot Acreage | Square Feet | Population |
|---------------|----------------------|-------------|-------------|-------------|-------------|------------|
| Educational   | Junior College (2yr) | 320         | Student     | 0.82        | 27,500      | 0          |

- 3) Energy: The CalEEMod assumes compliance with 2013 CBC Title 24. This has been confirmed by the design team.

<sup>1</sup> 4.0 Greystone Use Permit Drwngs 6-20-16





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### Summary of Findings

#### GHG Emissions during Construction

The BAAQMD has not adopted GHG thresholds of significance for construction. The project's cumulative and annual construction emissions would both be less than the BAAQMD operational significance threshold of 1,100 metric tons per year. Therefore the proposed project GHG related construction emissions are less than significant.

The table below provides the emissions estimate for rehabilitation of the Culinary Institute of America Greystone facility.

| Construction Emissions (CalEEMod) |        |
|-----------------------------------|--------|
| Year 2017                         | 166.34 |
| Year 2018                         | 27.01  |

Table 2: Construction GHG Emissions (by year)

### GHG Annual Operational Emissions

The project unmitigated annual operational emissions are provided in the table below.

| Culinary Institute of America Greystone Rehabilitation                    |                                              |                                                          |                                       |                                          |
|---------------------------------------------------------------------------|----------------------------------------------|----------------------------------------------------------|---------------------------------------|------------------------------------------|
| Operations Unmitigate Annual GHG Emissions MTCO <sub>2</sub> e (CalEEMod) |                                              |                                                          |                                       |                                          |
| Emissions Category                                                        | No Project Analysis<br>(200 Students)<br>(A) | Project after<br>Rehabilitation<br>(320 Students)<br>(B) | Net<br>Emissions<br>Increase<br>(B-A) | Below<br>Threshold<br>of<br>Significance |
| Area                                                                      | 0.00                                         | 0.00                                                     | 114.93                                | yes                                      |
| Energy                                                                    | 109.11                                       | 109.11                                                   |                                       |                                          |
| Mobile                                                                    | 173.06                                       | 276.89                                                   |                                       |                                          |
| Waste                                                                     | 16.60                                        | 26.57                                                    |                                       |                                          |
| Water                                                                     | 1.89                                         | 3.03                                                     |                                       |                                          |
| Total 2019                                                                | 300.67                                       | 415.60                                                   | 114.93                                | yes                                      |
| Construction Emissions (CalEEMod)                                         |                                              |                                                          |                                       |                                          |
| Construction Year 2017                                                    | NA                                           | 166.34                                                   | 166.34                                | yes                                      |
| Construction Year 2018                                                    | NA                                           | 27.01                                                    | 27.01                                 | yes                                      |

Table 3: Operations Unmitigated Emissions<sup>2</sup>

This project will employ measures that will mitigate operational emissions below calculated values. These features identified in the project descriptions, plans and traffic study project documents are not quantified in this report as the unmitigated results are significantly below the threshold of significance.

- Elimination of the Wine Spectator Greystone Restaurant (WSGR)
- Reduced Farm to Table restaurant operation

<sup>2</sup> BAAQMD has not established thresholds for construction period emissions



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- Elimination of existing three separate dish wash rooms
- Replacement with one dish room saving 1,200,000 gallons per year.
- Use onsite well to supply domestic water that will substantially replace city water required
- Relocation of staff and programs to Copia (Napa) facility.
- Reduction of restaurant size and period of operation reducing water and effluent

The CalEEMod version 2013.2.2 emissions model was used to estimate CO<sub>2</sub>e emissions from construction and annual operation. The GHG construction emission estimates assumed construction would begin in 2017 and completed by 2018. The estimate is based on the first full year of operation of 2019. In summary, this construction and operation emissions for this project do not exceed the threshold of significance recommended by the Bay Area Air Quality Management District (BAAQMD).

The results are provided in the attachment on the following pages.

**Appendix:** CalEEMod model results

- 1) Culinary Institute of America Greystone Rehabilitation Project
- 2) Culinary Institute of America Greystone Rehabilitation No Project Analysis

**Culinary Institute of America Greystone Rehabilitation No Project Analysis**  
**Bay Area AQMD Air District, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses            | Size   | Metric  | Lot Acreage | Floor Surface Area | Population |
|----------------------|--------|---------|-------------|--------------------|------------|
| Junior College (2Yr) | 200.00 | Student | 0.82        | 27,500.00          | 0          |

### 1.2 Other Project Characteristics

|                                 |                                |                                 |       |                                  |       |
|---------------------------------|--------------------------------|---------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>             | Rural                          | <b>Wind Speed (m/s)</b>         | 2.2   | <b>Precipitation Freq (Days)</b> | 64    |
| <b>Climate Zone</b>             | 4                              |                                 |       | <b>Operational Year</b>          | 2019  |
| <b>Utility Company</b>          | Pacific Gas & Electric Company |                                 |       |                                  |       |
| <b>CO2 Intensity (lb/MW hr)</b> | 641.35                         | <b>CH4 Intensity (lb/MW hr)</b> | 0.029 | <b>N2O Intensity (lb/MW hr)</b>  | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - Base case (no project) analysis

Land Use - No project analysis for 200 students.

Construction Phase - Construction Phase - Interior rehabilitation, no site demolition, site prep, grading, trenching, paving, or architectural coating. Anticipated 14 month construction schedule. Construction will occur M - F, 8am-5pm.

| Table Name                | Column Name       | Default Value | New Value |
|---------------------------|-------------------|---------------|-----------|
| tblConstructionPhase      | NumDays           | 100.00        | 294.00    |
| tblLandUse                | LandUseSquareFeet | 8,730.45      | 27,500.00 |
| tblLandUse                | LotAcreage        | 0.20          | 0.82      |
| tblProjectCharacteristics | OperationalYear   | 2014          | 2019      |
| tblProjectCharacteristics | UrbanizationLevel | Urban         | Rural     |

## 2.0 Emissions Summary

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### 2.1 Overall Construction

#### Unmitigated Construction

|       | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e     |
|-------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|----------|
| Year  | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |             |        |          |
| 2017  |         |     |    |     |               |              |            |                |               |             |          |           | 165.4531  | 0.0421      | 0.0000 | 166.3375 |
| 2018  |         |     |    |     |               |              |            |                |               |             |          |           | 26.8634   | 7.2000e-003 | 0.0000 | 27.0146  |
| Total |         |     |    |     |               |              |            |                |               |             |          |           | 192.3164  | 0.0493      | 0.0000 | 193.3521 |

#### Mitigated Construction

|       | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e     |
|-------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|----------|
| Year  | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |             |        |          |
| 2017  |         |     |    |     |               |              |            |                |               |             |          |           | 165.4529  | 0.0421      | 0.0000 | 166.3373 |
| 2018  |         |     |    |     |               |              |            |                |               |             |          |           | 26.8633   | 7.2000e-003 | 0.0000 | 27.0146  |
| Total |         |     |    |     |               |              |            |                |               |             |          |           | 192.3163  | 0.0493      | 0.0000 | 193.3519 |

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 0.00         | 0.00       | 0.00           | 0.00          | 0.00        | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

## 2.2 Overall Operational

### Unmitigated Operational

|          | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2   | CH4         | N2O         | CO2e        |
|----------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-------------|-------------|-------------|-------------|
| Category | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |             |             |             |             |
| Area     |         |     |    |     |               |              |            |                |               |             |          |           | 3.5700e-003 | 1.0000e-005 | 0.0000      | 3.7800e-003 |
| Energy   |         |     |    |     |               |              |            |                |               |             |          |           | 108.6111    | 3.9500e-003 | 1.3500e-003 | 109.1119    |
| Mobile   |         |     |    |     |               |              |            |                |               |             |          |           | 172.9169    | 6.5700e-003 | 0.0000      | 173.0550    |
| Waste    |         |     |    |     |               |              |            |                |               |             |          |           | 7.4092      | 0.4379      | 0.0000      | 16.6044     |
| Water    |         |     |    |     |               |              |            |                |               |             |          |           | 1.4919      | 0.0140      | 3.4000e-004 | 1.8923      |
| Total    |         |     |    |     |               |              |            |                |               |             |          |           | 290.4326    | 0.4624      | 1.6900e-003 | 300.6674    |

**2.2 Overall Operational****Mitigated Operational**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2       | CH4           | N2O                | CO2e            |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------------|---------------|--------------------|-----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                 |               |                    |                 |
| Area         |         |     |    |     |               |              |            |                |               |             |          |           | 3.5700e-003     | 1.0000e-005   | 0.0000             | 3.7800e-003     |
| Energy       |         |     |    |     |               |              |            |                |               |             |          |           | 108.6111        | 3.9500e-003   | 1.3500e-003        | 109.1119        |
| Mobile       |         |     |    |     |               |              |            |                |               |             |          |           | 172.9169        | 6.5700e-003   | 0.0000             | 173.0550        |
| Waste        |         |     |    |     |               |              |            |                |               |             |          |           | 7.4092          | 0.4379        | 0.0000             | 16.6044         |
| Water        |         |     |    |     |               |              |            |                |               |             |          |           | 1.4919          | 0.0140        | 3.4000e-004        | 1.8921          |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>290.4326</b> | <b>0.4624</b> | <b>1.6900e-003</b> | <b>300.6672</b> |

|                          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2    | NBio-CO2    | Total CO2   | CH4         | N2O         | CO2e        |
|--------------------------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Percent Reduction</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b>   | <b>0.00</b>  | <b>0.00</b> | <b>0.00</b>    | <b>0.00</b>   | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> |

**3.0 Construction Detail****Construction Phase**

| Phase Number | Phase Name          | Phase Type            | Start Date | End Date  | Num Days Week | Num Days | Phase Description |
|--------------|---------------------|-----------------------|------------|-----------|---------------|----------|-------------------|
| 1            | Demolition          | Demolition            | 1/1/2017   | 1/13/2017 | 5             | 10       |                   |
| 2            | Interior renovation | Building Construction | 1/14/2017  | 3/1/2018  | 5             | 294      |                   |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)**

#### OffRoad Equipment

| Phase Name          | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|---------------------|---------------------------|--------|-------------|-------------|-------------|
| Demolition          | Concrete/Industrial Saws  | 1      | 8.00        | 81          | 0.73        |
| Demolition          | Rubber Tired Dozers       | 1      | 1.00        | 255         | 0.40        |
| Demolition          | Tractors/Loaders/Backhoes | 2      | 6.00        | 97          | 0.37        |
| Interior renovation | Cranes                    | 1      | 4.00        | 226         | 0.29        |
| Interior renovation | Forklifts                 | 2      | 6.00        | 89          | 0.20        |
| Interior renovation | Tractors/Loaders/Backhoes | 2      | 8.00        | 97          | 0.37        |

#### Trips and VMT

| Phase Name          | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Demolition          | 4                       | 10.00              | 0.00               | 125.00              | 12.40              | 6.60               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Interior renovation | 5                       | 12.00              | 5.00               | 0.00                | 12.40              | 6.60               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

### **3.1 Mitigation Measures Construction**

**3.2 Demolition - 2017****Unmitigated Construction On-Site**

|               | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Fugitive Dust |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      |         |     |    |     |               |              |            |                |               |             |          |           | 5.3697        | 1.0600e-003        | 0.0000        | 5.3919        |
| <b>Total</b>  |         |     |    |     |               |              |            |                |               |             |          |           | <b>5.3697</b> | <b>1.0600e-003</b> | <b>0.0000</b> | <b>5.3919</b> |

**Unmitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 4.2147        | 3.0000e-005        | 0.0000        | 4.2153        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 0.3959        | 2.0000e-005        | 0.0000        | 0.3964        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>4.6106</b> | <b>5.0000e-005</b> | <b>0.0000</b> | <b>4.6117</b> |



**3.2 Demolition - 2017****Mitigated Construction On-Site**

|               | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Fugitive Dust |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      |         |     |    |     |               |              |            |                |               |             |          |           | 5.3697        | 1.0600e-003        | 0.0000        | 5.3919        |
| <b>Total</b>  |         |     |    |     |               |              |            |                |               |             |          |           | <b>5.3697</b> | <b>1.0600e-003</b> | <b>0.0000</b> | <b>5.3919</b> |

**Mitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 4.2147        | 3.0000e-005        | 0.0000        | 4.2153        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 0.3959        | 2.0000e-005        | 0.0000        | 0.3964        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>4.6106</b> | <b>5.0000e-005</b> | <b>0.0000</b> | <b>4.6117</b> |

**3.3 Interior renovation - 2017****Unmitigated Construction On-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------------|---------------|---------------|-----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                 |               |               |                 |
| Off-Road     |         |     |    |     |               |              |            |                |               |             |          |           | 131.4886        | 0.0403        | 0.0000        | 132.3347        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>131.4886</b> | <b>0.0403</b> | <b>0.0000</b> | <b>132.3347</b> |

**Unmitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                |                    |               |                |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 12.1065        | 1.0000e-004        | 0.0000        | 12.1085        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 11.8777        | 6.2000e-004        | 0.0000        | 11.8907        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>23.9842</b> | <b>7.2000e-004</b> | <b>0.0000</b> | <b>23.9993</b> |

**3.3 Interior renovation - 2017****Mitigated Construction On-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------------|---------------|---------------|-----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                 |               |               |                 |
| Off-Road     |         |     |    |     |               |              |            |                |               |             |          |           | 131.4885        | 0.0403        | 0.0000        | 132.3345        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>131.4885</b> | <b>0.0403</b> | <b>0.0000</b> | <b>132.3345</b> |

**Mitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                |                    |               |                |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 12.1065        | 1.0000e-004        | 0.0000        | 12.1085        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 11.8777        | 6.2000e-004        | 0.0000        | 11.8907        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>23.9842</b> | <b>7.2000e-004</b> | <b>0.0000</b> | <b>23.9993</b> |

**3.3 Interior renovation - 2018****Unmitigated Construction On-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                |                    |               |                |
| Off-Road     |         |     |    |     |               |              |            |                |               |             |          |           | 22.7572        | 7.0800e-003        | 0.0000        | 22.9059        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>22.7572</b> | <b>7.0800e-003</b> | <b>0.0000</b> | <b>22.9059</b> |

**Unmitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 2.0933        | 2.0000e-005        | 0.0000        | 2.0936        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 2.0129        | 1.0000e-004        | 0.0000        | 2.0150        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>4.1062</b> | <b>1.2000e-004</b> | <b>0.0000</b> | <b>4.1087</b> |

**3.3 Interior renovation - 2018****Mitigated Construction On-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                |                    |               |                |
| Off-Road     |         |     |    |     |               |              |            |                |               |             |          |           | 22.7571        | 7.0800e-003        | 0.0000        | 22.9059        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>22.7571</b> | <b>7.0800e-003</b> | <b>0.0000</b> | <b>22.9059</b> |

**Mitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 2.0933        | 2.0000e-005        | 0.0000        | 2.0936        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 2.0129        | 1.0000e-004        | 0.0000        | 2.0150        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>4.1062</b> | <b>1.2000e-004</b> | <b>0.0000</b> | <b>4.1087</b> |

**4.0 Operational Detail - Mobile**

#### 4.1 Mitigation Measures Mobile

|             | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e     |
|-------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|----------|
| Category    | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |             |        |          |
| Mitigated   |         |     |    |     |               |              |            |                |               |             |          |           | 172.9169  | 6.5700e-003 | 0.0000 | 173.0550 |
| Unmitigated |         |     |    |     |               |              |            |                |               |             |          |           | 172.9169  | 6.5700e-003 | 0.0000 | 173.0550 |

#### 4.2 Trip Summary Information

| Land Use             | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|----------------------|-------------------------|----------|--------|-------------|------------|
|                      | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Junior College (2Yr) | 240.00                  | 84.00    | 8.00   | 448,420     | 448,420    |
| Total                | 240.00                  | 84.00    | 8.00   | 448,420     | 448,420    |

#### 4.3 Trip Type Information

| Land Use             | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|----------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                      | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Junior College (2Yr) | 14.70      | 6.60       | 6.60        | 6.40       | 88.60      | 5.00        | 92             | 7        | 1       |

| LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0.546556 | 0.063101 | 0.174427 | 0.122200 | 0.033877 | 0.004835 | 0.015546 | 0.025040 | 0.002093 | 0.003260 | 0.006731 | 0.000667 | 0.001666 |

#### 5.0 Energy Detail

Historical Energy Use: N

## 5.1 Mitigation Measures Energy

|                         | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e    |
|-------------------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|---------|
| Category                | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |             |             |         |
| Electricity Mitigated   |         |     |    |     |               |              |            |                |               |             |          |           | 71.6006   | 3.2400e-003 | 6.7000e-004 | 71.8762 |
| Electricity Unmitigated |         |     |    |     |               |              |            |                |               |             |          |           | 71.6006   | 3.2400e-003 | 6.7000e-004 | 71.8762 |
| NaturalGas Mitigated    |         |     |    |     |               |              |            |                |               |             |          |           | 37.0105   | 7.1000e-004 | 6.8000e-004 | 37.2357 |
| NaturalGas Unmitigated  |         |     |    |     |               |              |            |                |               |             |          |           | 37.0105   | 7.1000e-004 | 6.8000e-004 | 37.2357 |

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

|                      | NaturalGas Use | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e    |
|----------------------|----------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|---------|
| Land Use             | kBTU/yr        | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |             |             |         |
| Junior College (2Yr) | 693550         |         |     |    |     |               |              |            |                |               |             |          |           | 37.0105   | 7.1000e-004 | 6.8000e-004 | 37.2357 |
| Total                |                |         |     |    |     |               |              |            |                |               |             |          |           | 37.0105   | 7.1000e-004 | 6.8000e-004 | 37.2357 |

**5.2 Energy by Land Use - NaturalGas****Mitigated**

|                      | NaturalGas Use | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2      | CH4                | N2O                | CO2e           |
|----------------------|----------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|----------------|--------------------|--------------------|----------------|
| Land Use             | kBTU/yr        | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                |                    |                    |                |
| Junior College (2Yr) | 693550         |         |     |    |     |               |              |            |                |               |             |          |           | 37.0105        | 7.1000e-004        | 6.8000e-004        | 37.2357        |
| <b>Total</b>         |                |         |     |    |     |               |              |            |                |               |             |          |           | <b>37.0105</b> | <b>7.1000e-004</b> | <b>6.8000e-004</b> | <b>37.2357</b> |

**5.3 Energy by Land Use - Electricity****Unmitigated**

|                      | Electricity Use | Total CO2      | CH4                | N2O                | CO2e           |
|----------------------|-----------------|----------------|--------------------|--------------------|----------------|
| Land Use             | kWh/yr          | MT/yr          |                    |                    |                |
| Junior College (2Yr) | 246125          | 71.6006        | 3.2400e-003        | 6.7000e-004        | 71.8762        |
| <b>Total</b>         |                 | <b>71.6006</b> | <b>3.2400e-003</b> | <b>6.7000e-004</b> | <b>71.8762</b> |



### 5.3 Energy by Land Use - Electricity

#### Mitigated

|                      | Electricity Use | Total CO2      | CH4                | N2O                | CO2e           |
|----------------------|-----------------|----------------|--------------------|--------------------|----------------|
| Land Use             | kWh/yr          | MT/yr          |                    |                    |                |
| Junior College (2Yr) | 246125          | 71.6006        | 3.2400e-003        | 6.7000e-004        | 71.8762        |
| <b>Total</b>         |                 | <b>71.6006</b> | <b>3.2400e-003</b> | <b>6.7000e-004</b> | <b>71.8762</b> |

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

|             | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2   | CH4         | N2O    | CO2e        |
|-------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-------------|-------------|--------|-------------|
| Category    | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |             |             |        |             |
| Mitigated   |         |     |    |     |               |              |            |                |               |             |          |           | 3.5700e-003 | 1.0000e-005 | 0.0000 | 3.7800e-003 |
| Unmitigated |         |     |    |     |               |              |            |                |               |             |          |           | 3.5700e-003 | 1.0000e-005 | 0.0000 | 3.7800e-003 |

**6.2 Area by SubCategory****Unmitigated**

|                       | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2          | CH4                | N2O           | CO2e               |
|-----------------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|--------------------|--------------------|---------------|--------------------|
| SubCategory           | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                    |                    |               |                    |
| Architectural Coating |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| Consumer Products     |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| Landscaping           |         |     |    |     |               |              |            |                |               |             |          |           | 3.5700e-003        | 1.0000e-005        | 0.0000        | 3.7800e-003        |
| <b>Total</b>          |         |     |    |     |               |              |            |                |               |             |          |           | <b>3.5700e-003</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>3.7800e-003</b> |

**Mitigated**

|                       | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2          | CH4                | N2O           | CO2e               |
|-----------------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|--------------------|--------------------|---------------|--------------------|
| SubCategory           | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                    |                    |               |                    |
| Architectural Coating |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| Consumer Products     |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| Landscaping           |         |     |    |     |               |              |            |                |               |             |          |           | 3.5700e-003        | 1.0000e-005        | 0.0000        | 3.7800e-003        |
| <b>Total</b>          |         |     |    |     |               |              |            |                |               |             |          |           | <b>3.5700e-003</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>3.7800e-003</b> |

**7.0 Water Detail**

## 7.1 Mitigation Measures Water

|             | Total CO2 | CH4    | N2O         | CO2e   |
|-------------|-----------|--------|-------------|--------|
| Category    | MT/yr     |        |             |        |
| Mitigated   | 1.4919    | 0.0140 | 3.4000e-004 | 1.8921 |
| Unmitigated | 1.4919    | 0.0140 | 3.4000e-004 | 1.8923 |

## 7.2 Water by Land Use

### Unmitigated

|                      | Indoor/Outdoor Use | Total CO2     | CH4           | N2O                | CO2e          |
|----------------------|--------------------|---------------|---------------|--------------------|---------------|
| Land Use             | Mgal               | MT/yr         |               |                    |               |
| Junior College (2Yr) | 0.42822 / 0.66978  | 1.4919        | 0.0140        | 3.4000e-004        | 1.8923        |
| <b>Total</b>         |                    | <b>1.4919</b> | <b>0.0140</b> | <b>3.4000e-004</b> | <b>1.8923</b> |

## 7.2 Water by Land Use

### Mitigated

|                      | Indoor/Outdoor Use | Total CO2     | CH4           | N2O                | CO2e          |
|----------------------|--------------------|---------------|---------------|--------------------|---------------|
| Land Use             | Mgal               | MT/yr         |               |                    |               |
| Junior College (2Yr) | 0.42822 / 0.66978  | 1.4919        | 0.0140        | 3.4000e-004        | 1.8921        |
| <b>Total</b>         |                    | <b>1.4919</b> | <b>0.0140</b> | <b>3.4000e-004</b> | <b>1.8921</b> |

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

#### Category/Year

|             | Total CO2 | CH4    | N2O    | CO2e    |
|-------------|-----------|--------|--------|---------|
|             | MT/yr     |        |        |         |
| Mitigated   | 7.4092    | 0.4379 | 0.0000 | 16.6044 |
| Unmitigated | 7.4092    | 0.4379 | 0.0000 | 16.6044 |

**8.2 Waste by Land Use****Unmitigated**

|                         | Waste<br>Disposed | Total CO2     | CH4           | N2O           | CO2e           |
|-------------------------|-------------------|---------------|---------------|---------------|----------------|
| Land Use                | tons              | MT/yr         |               |               |                |
| Junior College<br>(2Yr) | 36.5              | 7.4092        | 0.4379        | 0.0000        | 16.6044        |
| <b>Total</b>            |                   | <b>7.4092</b> | <b>0.4379</b> | <b>0.0000</b> | <b>16.6044</b> |

**Mitigated**

|                         | Waste<br>Disposed | Total CO2     | CH4           | N2O           | CO2e           |
|-------------------------|-------------------|---------------|---------------|---------------|----------------|
| Land Use                | tons              | MT/yr         |               |               |                |
| Junior College<br>(2Yr) | 36.5              | 7.4092        | 0.4379        | 0.0000        | 16.6044        |
| <b>Total</b>            |                   | <b>7.4092</b> | <b>0.4379</b> | <b>0.0000</b> | <b>16.6044</b> |

**9.0 Operational Offroad**

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| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

## 10.0 Vegetation

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**Culinary Institute of America Main Street Helena Greystone Rehabilitation**  
**Bay Area AQMD Air District, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses            | Size   | Metric  | Lot Acreage | Floor Surface Area | Population |
|----------------------|--------|---------|-------------|--------------------|------------|
| Junior College (2Yr) | 320.00 | Student | 0.82        | 27,500.00          | 0          |

### 1.2 Other Project Characteristics

|                                 |                                |                                 |       |                                  |       |
|---------------------------------|--------------------------------|---------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>             | Rural                          | <b>Wind Speed (m/s)</b>         | 2.2   | <b>Precipitation Freq (Days)</b> | 64    |
| <b>Climate Zone</b>             | 4                              |                                 |       | <b>Operational Year</b>          | 2019  |
| <b>Utility Company</b>          | Pacific Gas & Electric Company |                                 |       |                                  |       |
| <b>CO2 Intensity (lb/MW hr)</b> | 641.35                         | <b>CH4 Intensity (lb/MW hr)</b> | 0.029 | <b>N2O Intensity (lb/MW hr)</b>  | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - First full year of operation

Land Use - Student population 320 max; project acreage (building footprint) = .82 acres; Rehabilitation area = 27,500 sqft. The project is an interior rehabilitation. Project has no site demolition,

Construction Phase - Interior rehabilitation, no site demolition, site prep, grading, trenching, paving, or architectural coating. Anticipated 14 month construction schedule. Construction will occur M - F, 8am-5pm.

| Table Name                | Column Name       | Default Value | New Value |
|---------------------------|-------------------|---------------|-----------|
| tblConstructionPhase      | NumDays           | 100.00        | 294.00    |
| tblLandUse                | LandUseSquareFeet | 13,968.72     | 27,500.00 |
| tblLandUse                | LotAcreage        | 0.32          | 0.82      |
| tblProjectCharacteristics | OperationalYear   | 2014          | 2019      |
| tblProjectCharacteristics | UrbanizationLevel | Urban         | Rural     |

## 2.0 Emissions Summary

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### 2.1 Overall Construction

#### Unmitigated Construction

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------------|---------------|---------------|-----------------|
| Year         | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                 |               |               |                 |
| 2017         |         |     |    |     |               |              |            |                |               |             |          |           | 165.4531        | 0.0421        | 0.0000        | 166.3375        |
| 2018         |         |     |    |     |               |              |            |                |               |             |          |           | 26.8634         | 7.2000e-003   | 0.0000        | 27.0146         |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>192.3164</b> | <b>0.0493</b> | <b>0.0000</b> | <b>193.3521</b> |

#### Mitigated Construction

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------------|---------------|---------------|-----------------|
| Year         | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                 |               |               |                 |
| 2017         |         |     |    |     |               |              |            |                |               |             |          |           | 165.4529        | 0.0421        | 0.0000        | 166.3373        |
| 2018         |         |     |    |     |               |              |            |                |               |             |          |           | 26.8633         | 7.2000e-003   | 0.0000        | 27.0146         |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>192.3163</b> | <b>0.0493</b> | <b>0.0000</b> | <b>193.3519</b> |



|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 0.00         | 0.00       | 0.00           | 0.00          | 0.00        | 0.00     | 0.00      | 0.00      | 0.00 | 0.00 | 0.00 |

## 2.2 Overall Operational

### Unmitigated Operational

|          | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2   | CH4         | N2O         | CO2e        |
|----------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-------------|-------------|-------------|-------------|
| Category | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |             |             |             |             |
| Area     |         |     |    |     |               |              |            |                |               |             |          |           | 5.7200e-003 | 2.0000e-005 | 0.0000      | 6.0400e-003 |
| Energy   |         |     |    |     |               |              |            |                |               |             |          |           | 108.6111    | 3.9500e-003 | 1.3500e-003 | 109.1119    |
| Mobile   |         |     |    |     |               |              |            |                |               |             |          |           | 276.6671    | 0.0105      | 0.0000      | 276.8880    |
| Waste    |         |     |    |     |               |              |            |                |               |             |          |           | 11.8547     | 0.7006      | 0.0000      | 26.5671     |
| Water    |         |     |    |     |               |              |            |                |               |             |          |           | 2.3870      | 0.0224      | 5.5000e-004 | 3.0276      |
| Total    |         |     |    |     |               |              |            |                |               |             |          |           | 399.5255    | 0.7375      | 1.9000e-003 | 415.6006    |

**2.2 Overall Operational****Mitigated Operational**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2       | CH4           | N2O                | CO2e            |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------------|---------------|--------------------|-----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                 |               |                    |                 |
| Area         |         |     |    |     |               |              |            |                |               |             |          |           | 5.7200e-003     | 2.0000e-005   | 0.0000             | 6.0400e-003     |
| Energy       |         |     |    |     |               |              |            |                |               |             |          |           | 108.6111        | 3.9500e-003   | 1.3500e-003        | 109.1119        |
| Mobile       |         |     |    |     |               |              |            |                |               |             |          |           | 276.6671        | 0.0105        | 0.0000             | 276.8880        |
| Waste        |         |     |    |     |               |              |            |                |               |             |          |           | 11.8547         | 0.7006        | 0.0000             | 26.5671         |
| Water        |         |     |    |     |               |              |            |                |               |             |          |           | 2.3870          | 0.0224        | 5.5000e-004        | 3.0273          |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>399.5255</b> | <b>0.7375</b> | <b>1.9000e-003</b> | <b>415.6003</b> |

|                          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2    | NBio-CO2    | Total CO2   | CH4         | N2O         | CO2e        |
|--------------------------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Percent Reduction</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b>   | <b>0.00</b>  | <b>0.00</b> | <b>0.00</b>    | <b>0.00</b>   | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> |

**3.0 Construction Detail****Construction Phase**

| Phase Number | Phase Name          | Phase Type            | Start Date | End Date  | Num Days Week | Num Days | Phase Description |
|--------------|---------------------|-----------------------|------------|-----------|---------------|----------|-------------------|
| 1            | Demolition          | Demolition            | 1/1/2017   | 1/13/2017 | 5             | 10       |                   |
| 2            | Interior renovation | Building Construction | 1/14/2017  | 3/1/2018  | 5             | 294      |                   |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)**

#### OffRoad Equipment

| Phase Name          | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|---------------------|---------------------------|--------|-------------|-------------|-------------|
| Demolition          | Concrete/Industrial Saws  | 1      | 8.00        | 81          | 0.73        |
| Demolition          | Rubber Tired Dozers       | 1      | 1.00        | 255         | 0.40        |
| Demolition          | Tractors/Loaders/Backhoes | 2      | 6.00        | 97          | 0.37        |
| Interior renovation | Cranes                    | 1      | 4.00        | 226         | 0.29        |
| Interior renovation | Forklifts                 | 2      | 6.00        | 89          | 0.20        |
| Interior renovation | Tractors/Loaders/Backhoes | 2      | 8.00        | 97          | 0.37        |

#### Trips and VMT

| Phase Name          | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Demolition          | 4                       | 10.00              | 0.00               | 125.00              | 12.40              | 6.60               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Interior renovation | 5                       | 12.00              | 5.00               | 0.00                | 12.40              | 6.60               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

### **3.1 Mitigation Measures Construction**

**3.2 Demolition - 2017****Unmitigated Construction On-Site**

|               | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Fugitive Dust |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      |         |     |    |     |               |              |            |                |               |             |          |           | 5.3697        | 1.0600e-003        | 0.0000        | 5.3919        |
| <b>Total</b>  |         |     |    |     |               |              |            |                |               |             |          |           | <b>5.3697</b> | <b>1.0600e-003</b> | <b>0.0000</b> | <b>5.3919</b> |

**Unmitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 4.2147        | 3.0000e-005        | 0.0000        | 4.2153        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 0.3959        | 2.0000e-005        | 0.0000        | 0.3964        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>4.6106</b> | <b>5.0000e-005</b> | <b>0.0000</b> | <b>4.6117</b> |

**3.2 Demolition - 2017****Mitigated Construction On-Site**

|               | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Fugitive Dust |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      |         |     |    |     |               |              |            |                |               |             |          |           | 5.3697        | 1.0600e-003        | 0.0000        | 5.3919        |
| <b>Total</b>  |         |     |    |     |               |              |            |                |               |             |          |           | <b>5.3697</b> | <b>1.0600e-003</b> | <b>0.0000</b> | <b>5.3919</b> |

**Mitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 4.2147        | 3.0000e-005        | 0.0000        | 4.2153        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 0.3959        | 2.0000e-005        | 0.0000        | 0.3964        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>4.6106</b> | <b>5.0000e-005</b> | <b>0.0000</b> | <b>4.6117</b> |

**3.3 Interior renovation - 2017****Unmitigated Construction On-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------------|---------------|---------------|-----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                 |               |               |                 |
| Off-Road     |         |     |    |     |               |              |            |                |               |             |          |           | 131.4886        | 0.0403        | 0.0000        | 132.3347        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>131.4886</b> | <b>0.0403</b> | <b>0.0000</b> | <b>132.3347</b> |

**Unmitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                |                    |               |                |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 12.1065        | 1.0000e-004        | 0.0000        | 12.1085        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 11.8777        | 6.2000e-004        | 0.0000        | 11.8907        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>23.9842</b> | <b>7.2000e-004</b> | <b>0.0000</b> | <b>23.9993</b> |

**3.3 Interior renovation - 2017****Mitigated Construction On-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------------|---------------|---------------|-----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                 |               |               |                 |
| Off-Road     |         |     |    |     |               |              |            |                |               |             |          |           | 131.4885        | 0.0403        | 0.0000        | 132.3345        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>131.4885</b> | <b>0.0403</b> | <b>0.0000</b> | <b>132.3345</b> |

**Mitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                |                    |               |                |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 12.1065        | 1.0000e-004        | 0.0000        | 12.1085        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 11.8777        | 6.2000e-004        | 0.0000        | 11.8907        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>23.9842</b> | <b>7.2000e-004</b> | <b>0.0000</b> | <b>23.9993</b> |

**3.3 Interior renovation - 2018****Unmitigated Construction On-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                |                    |               |                |
| Off-Road     |         |     |    |     |               |              |            |                |               |             |          |           | 22.7572        | 7.0800e-003        | 0.0000        | 22.9059        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>22.7572</b> | <b>7.0800e-003</b> | <b>0.0000</b> | <b>22.9059</b> |

**Unmitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 2.0933        | 2.0000e-005        | 0.0000        | 2.0936        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 2.0129        | 1.0000e-004        | 0.0000        | 2.0150        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>4.1062</b> | <b>1.2000e-004</b> | <b>0.0000</b> | <b>4.1087</b> |



**3.3 Interior renovation - 2018****Mitigated Construction On-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                |                    |               |                |
| Off-Road     |         |     |    |     |               |              |            |                |               |             |          |           | 22.7571        | 7.0800e-003        | 0.0000        | 22.9059        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>22.7571</b> | <b>7.0800e-003</b> | <b>0.0000</b> | <b>22.9059</b> |

**Mitigated Construction Off-Site**

|              | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |               |                    |               |               |
| Hauling      |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Vendor       |         |     |    |     |               |              |            |                |               |             |          |           | 2.0933        | 2.0000e-005        | 0.0000        | 2.0936        |
| Worker       |         |     |    |     |               |              |            |                |               |             |          |           | 2.0129        | 1.0000e-004        | 0.0000        | 2.0150        |
| <b>Total</b> |         |     |    |     |               |              |            |                |               |             |          |           | <b>4.1062</b> | <b>1.2000e-004</b> | <b>0.0000</b> | <b>4.1087</b> |

**4.0 Operational Detail - Mobile**

#### 4.1 Mitigation Measures Mobile

|             | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e     |
|-------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Category    | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |        |        |          |
| Mitigated   |         |     |    |     |               |              |            |                |               |             |          |           | 276.6671  | 0.0105 | 0.0000 | 276.8880 |
| Unmitigated |         |     |    |     |               |              |            |                |               |             |          |           | 276.6671  | 0.0105 | 0.0000 | 276.8880 |

#### 4.2 Trip Summary Information

| Land Use             | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|----------------------|-------------------------|----------|--------|-------------|------------|
|                      | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Junior College (2Yr) | 384.00                  | 134.40   | 12.80  | 717,471     | 717,471    |
| Total                | 384.00                  | 134.40   | 12.80  | 717,471     | 717,471    |

#### 4.3 Trip Type Information

| Land Use             | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|----------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                      | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Junior College (2Yr) | 14.70      | 6.60       | 6.60        | 6.40       | 88.60      | 5.00        | 92             | 7        | 1       |

| LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0.546556 | 0.063101 | 0.174427 | 0.122200 | 0.033877 | 0.004835 | 0.015546 | 0.025040 | 0.002093 | 0.003260 | 0.006731 | 0.000667 | 0.001666 |

#### 5.0 Energy Detail

Historical Energy Use: N

## 5.1 Mitigation Measures Energy

|                         | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e    |
|-------------------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|---------|
| Category                | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |             |             |         |
| Electricity Mitigated   |         |     |    |     |               |              |            |                |               |             |          |           | 71.6006   | 3.2400e-003 | 6.7000e-004 | 71.8762 |
| Electricity Unmitigated |         |     |    |     |               |              |            |                |               |             |          |           | 71.6006   | 3.2400e-003 | 6.7000e-004 | 71.8762 |
| NaturalGas Mitigated    |         |     |    |     |               |              |            |                |               |             |          |           | 37.0105   | 7.1000e-004 | 6.8000e-004 | 37.2357 |
| NaturalGas Unmitigated  |         |     |    |     |               |              |            |                |               |             |          |           | 37.0105   | 7.1000e-004 | 6.8000e-004 | 37.2357 |

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

|                      | NaturalGas Use | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e    |
|----------------------|----------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|---------|
| Land Use             | kBTU/yr        | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |             |             |         |
| Junior College (2Yr) | 693550         |         |     |    |     |               |              |            |                |               |             |          |           | 37.0105   | 7.1000e-004 | 6.8000e-004 | 37.2357 |
| Total                |                |         |     |    |     |               |              |            |                |               |             |          |           | 37.0105   | 7.1000e-004 | 6.8000e-004 | 37.2357 |

**5.2 Energy by Land Use - NaturalGas****Mitigated**

|                      | NaturalGas Use | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2      | CH4                | N2O                | CO2e           |
|----------------------|----------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|----------------|--------------------|--------------------|----------------|
| Land Use             | kBTU/yr        | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                |                    |                    |                |
| Junior College (2Yr) | 693550         |         |     |    |     |               |              |            |                |               |             |          |           | 37.0105        | 7.1000e-004        | 6.8000e-004        | 37.2357        |
| <b>Total</b>         |                |         |     |    |     |               |              |            |                |               |             |          |           | <b>37.0105</b> | <b>7.1000e-004</b> | <b>6.8000e-004</b> | <b>37.2357</b> |

**5.3 Energy by Land Use - Electricity****Unmitigated**

|                      | Electricity Use | Total CO2      | CH4                | N2O                | CO2e           |
|----------------------|-----------------|----------------|--------------------|--------------------|----------------|
| Land Use             | kWh/yr          | MT/yr          |                    |                    |                |
| Junior College (2Yr) | 246125          | 71.6006        | 3.2400e-003        | 6.7000e-004        | 71.8762        |
| <b>Total</b>         |                 | <b>71.6006</b> | <b>3.2400e-003</b> | <b>6.7000e-004</b> | <b>71.8762</b> |

### 5.3 Energy by Land Use - Electricity

#### Mitigated

|                      | Electricity Use | Total CO2      | CH4                | N2O                | CO2e           |
|----------------------|-----------------|----------------|--------------------|--------------------|----------------|
| Land Use             | kWh/yr          | MT/yr          |                    |                    |                |
| Junior College (2Yr) | 246125          | 71.6006        | 3.2400e-003        | 6.7000e-004        | 71.8762        |
| <b>Total</b>         |                 | <b>71.6006</b> | <b>3.2400e-003</b> | <b>6.7000e-004</b> | <b>71.8762</b> |

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

|             | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2   | CH4         | N2O    | CO2e        |
|-------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-------------|-------------|--------|-------------|
| Category    | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |             |             |        |             |
| Mitigated   |         |     |    |     |               |              |            |                |               |             |          |           | 5.7200e-003 | 2.0000e-005 | 0.0000 | 6.0400e-003 |
| Unmitigated |         |     |    |     |               |              |            |                |               |             |          |           | 5.7200e-003 | 2.0000e-005 | 0.0000 | 6.0400e-003 |

**6.2 Area by SubCategory****Unmitigated**

|                       | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2          | CH4                | N2O           | CO2e               |
|-----------------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|--------------------|--------------------|---------------|--------------------|
| SubCategory           | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                    |                    |               |                    |
| Architectural Coating |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| Consumer Products     |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| Landscaping           |         |     |    |     |               |              |            |                |               |             |          |           | 5.7200e-003        | 2.0000e-005        | 0.0000        | 6.0400e-003        |
| <b>Total</b>          |         |     |    |     |               |              |            |                |               |             |          |           | <b>5.7200e-003</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>6.0400e-003</b> |

**Mitigated**

|                       | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2          | CH4                | N2O           | CO2e               |
|-----------------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|--------------------|--------------------|---------------|--------------------|
| SubCategory           | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |                    |                    |               |                    |
| Architectural Coating |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| Consumer Products     |         |     |    |     |               |              |            |                |               |             |          |           | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| Landscaping           |         |     |    |     |               |              |            |                |               |             |          |           | 5.7200e-003        | 2.0000e-005        | 0.0000        | 6.0400e-003        |
| <b>Total</b>          |         |     |    |     |               |              |            |                |               |             |          |           | <b>5.7200e-003</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>6.0400e-003</b> |

**7.0 Water Detail**

## 7.1 Mitigation Measures Water

|             | Total CO2 | CH4    | N2O         | CO2e   |
|-------------|-----------|--------|-------------|--------|
| Category    | MT/yr     |        |             |        |
| Mitigated   | 2.3870    | 0.0224 | 5.5000e-004 | 3.0273 |
| Unmitigated | 2.3870    | 0.0224 | 5.5000e-004 | 3.0276 |

## 7.2 Water by Land Use

### Unmitigated

|                      | Indoor/Outdoor Use | Total CO2     | CH4           | N2O                | CO2e          |
|----------------------|--------------------|---------------|---------------|--------------------|---------------|
| Land Use             | Mgal               | MT/yr         |               |                    |               |
| Junior College (2Yr) | 0.685152 / 1.07165 | 2.3870        | 0.0224        | 5.5000e-004        | 3.0276        |
| <b>Total</b>         |                    | <b>2.3870</b> | <b>0.0224</b> | <b>5.5000e-004</b> | <b>3.0276</b> |

## 7.2 Water by Land Use

### Mitigated

|                      | Indoor/Outdoor Use | Total CO2     | CH4           | N2O                | CO2e          |
|----------------------|--------------------|---------------|---------------|--------------------|---------------|
| Land Use             | Mgal               | MT/yr         |               |                    |               |
| Junior College (2Yr) | 0.685152 / 1.07165 | 2.3870        | 0.0224        | 5.5000e-004        | 3.0273        |
| <b>Total</b>         |                    | <b>2.3870</b> | <b>0.0224</b> | <b>5.5000e-004</b> | <b>3.0273</b> |

## 8.0 Waste Detail

---

### 8.1 Mitigation Measures Waste

#### Category/Year

|             | Total CO2 | CH4    | N2O    | CO2e    |
|-------------|-----------|--------|--------|---------|
|             | MT/yr     |        |        |         |
| Mitigated   | 11.8547   | 0.7006 | 0.0000 | 26.5671 |
| Unmitigated | 11.8547   | 0.7006 | 0.0000 | 26.5671 |



**8.2 Waste by Land Use****Unmitigated**

|                         | Waste<br>Disposed | Total CO2      | CH4           | N2O           | CO2e           |
|-------------------------|-------------------|----------------|---------------|---------------|----------------|
| Land Use                | tons              | MT/yr          |               |               |                |
| Junior College<br>(2Yr) | 58.4              | 11.8547        | 0.7006        | 0.0000        | 26.5671        |
| <b>Total</b>            |                   | <b>11.8547</b> | <b>0.7006</b> | <b>0.0000</b> | <b>26.5671</b> |

**Mitigated**

|                         | Waste<br>Disposed | Total CO2      | CH4           | N2O           | CO2e           |
|-------------------------|-------------------|----------------|---------------|---------------|----------------|
| Land Use                | tons              | MT/yr          |               |               |                |
| Junior College<br>(2Yr) | 58.4              | 11.8547        | 0.7006        | 0.0000        | 26.5671        |
| <b>Total</b>            |                   | <b>11.8547</b> | <b>0.7006</b> | <b>0.0000</b> | <b>26.5671</b> |

**9.0 Operational Offroad**

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

## 10.0 Vegetation

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VII. GREENHOUSE GAS EMISSIONS --

Would the project:

| In the columns to the right place a check in the box that relates to each of the question                                        | Potentially Significant Impact | Less Than Significant with Mitigations Incorporated | Less Than Significant Impact | No Impact |
|----------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------------------------------------|------------------------------|-----------|
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?      |                                |                                                     | X                            |           |
| b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? |                                |                                                     |                              | X         |
|                                                                                                                                  |                                |                                                     |                              |           |
|                                                                                                                                  |                                |                                                     |                              |           |
|                                                                                                                                  |                                |                                                     |                              |           |
|                                                                                                                                  |                                |                                                     |                              |           |
|                                                                                                                                  |                                |                                                     |                              |           |
|                                                                                                                                  |                                |                                                     |                              |           |
|                                                                                                                                  |                                |                                                     |                              |           |
| Discussion, and any mitigations required to make any impacts less than significant                                               |                                |                                                     |                              |           |

This Environmental Checklist Form has been provided to assist in the analysis of the environmental issues associated with the project. The following standard rules, generated from the CEQA Guidelines, apply when completing and reviewing the Environmental Checklist Form:

- 1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g. the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g. the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).*
- 2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.*
- 3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.*
- 4. "Negative Declaration: Potentially Significant Unless Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section 17, "Earlier Analysis," may be cross-referenced).*
- 5. Earlier analysis may be used where an effect has been adequately analyzed in an earlier EIR or Negative Declaration. In this case, a brief discussion should identify the following:*
  - a. Earlier Analysis Used. Identify and state where they are available for review.*
  - b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.*
  - c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures, which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.*
- 6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g. general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.*
- 7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.*
- 8. This checklist is only a suggested form, and lead agencies are free to use different formats. However, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.*
- 9. The analysis of each issue should identify: (a) the significance criteria or threshold used to evaluate each question; and (b) the mitigation measure identified, if any, to reduce the impact to a level of less-than-significant.*



DRAINAGE AND HYDROLOGY  
ANALYSIS

CULINARY INSITUTE OF  
AMERICA  
VINEYARD LODGE  
USE PERMIT APPLICATION

830 Pratt Avenue  
St. Helena, CA, 94574



Project No. 2016096  
September 2, 2016

CIA-VINEYARD LODGE  
Project No. 2016096  
September 2, 2016

SUMMIT ENGINEERING, INC.  
Hydrology and Hydraulic Calculations  
BY: CIP CHK: MS

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|                                                              |          |
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CIA-VINEYARD LODGE  
 Project No. 2016096  
 September 2, 2016

**SUMMIT ENGINEERING, INC.**  
 Hydrology and Hydraulic Calculations  
 BY: CIP CHK: MS

## PURPOSE

This summary describes the drainage analysis associated with the proposed improvements at the Culinary Institute of America's Vineyard Lodge expansion project. The analysis includes the pre- and post-construction hydrology analysis to conclude that there shall not be any increase in the stormwater runoff for the 10-year storm. All the stormwater conveyances shall be sized to accommodate the runoff from the 100-year storm event.

## PRE/POST PROJECT HYDROLOGY ANALYSIS

A hydrology analysis was conducted for the pre and post construction project watersheds using the NRCS/TR-55 curve number method. The intent of this analysis is to demonstrate that there shall not be an increase stormwater runoff volume or flowrate resulting from the proposed improvements and the preconstruction runoff conditions shall be maintained. Refer to the Pre-/Post-Construction Hydrology Map, H1, in Appendix D for the pre-post-construction pervious and impervious surface areas. Composite CN values for the pre-/post-construction conditions are shown below and are based on hydrologic soil group B. Refer to Appendix B for the pre-/post-construction hydrographs. The parameters used in this analysis are located in Appendix A. For information on the pervious pavers and the associated curve number values, refer to Appendix C. Refer to Appendix D for Pre-/Post-Construction Hydrology map.

### PRE-CONSTRUCTION

|                               | CN        | Area (ac)     |
|-------------------------------|-----------|---------------|
| <b>Impervious</b>             |           |               |
| Paved Areas/Building Rooftop  | 98        | 1.52          |
| <b>Pervious</b>               |           |               |
| Landscaping/Grass             | 69        | 1.31          |
| Permeable Pavers              | 65        | 0.12          |
| <b>Composite Curve Number</b> | <b>84</b> |               |
| <b>Total</b>                  |           | <b>2.95</b>   |
|                               |           |               |
| Runoff Flow Rate (cfs)        | 10-yr     | <b>3.013</b>  |
| Runoff Volume (cuft)          | 10-yr     | <b>42,737</b> |
| Time of Concentration (min)   |           | 10            |



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#### POST-CONSTRUCTION

|                               | CN        | Area (ac)     |
|-------------------------------|-----------|---------------|
| Impervious                    |           |               |
| Paved Areas/Building Rooftop  | 98        | 1.62          |
| Pervious                      |           |               |
| Landscaping/Grass             | 69        | 0.88          |
| Permeable Pavers              | 65        | 0.45          |
| <b>Composite Curve Number</b> | <b>84</b> |               |
| <b>Total</b>                  |           | <b>2.95</b>   |
|                               |           |               |
| Runoff Flow Rate (cfs)        | 10-yr     | <b>3.013</b>  |
| Runoff Volume (cuft)          | 10-yr     | <b>42,737</b> |
| Time of Concentration (min)   |           | 10            |

#### PRE-/POST-PROJECT COMPARISON

|                     | Project Watershed |                      |
|---------------------|-------------------|----------------------|
|                     | Q (cfs)           | V (ft <sup>3</sup> ) |
| <b>Pre-Project</b>  | 3.013             | 42,737               |
| <b>Post-Project</b> | 3.013             | 42,737               |
| <b>Difference</b>   | 0.000             | 0                    |

## HYDRAULICS

### RAINFALL DATA/DESIGN PARAMETERS

Hydraulic Analysis for this project was performed using the Napa County Road and Street Standards with the Rational Method in order to appropriately size stormwater conveyances.

The location of the site and review of these standards provides the following mathematical models and constant values used in the hydraulic analysis. All supporting information for the parameters given in this section can be found in Appendix A.

### NAPA COUNTY ROAD AND STREET STANDARDS

The Napa County Road and Street Standards gives the following parameters for the project location. The minimum initial time of concentration was found using Hydraflow Hydrographs. The following Napa County Road and Street Standards parameters were used with the Rational Method for hydraulic calculations of the storm drain network. See Appendix B for pipe capacity report.

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Mean Seasonal Precipitation : 33 in/yr

Minimum Initial Time of Concentration :  $T_c = 10$  min

#### 10-YEAR STORM EVENT

60 Minute Rainfall ( $P_{60}$ ) :  $P_{60} = 1.0$  in.

Rainfall Intensity : 2.41 in/hr

#### 100-YEAR STORM EVENT

60 Minute Rainfall ( $P_{60}$ ) :  $P_{60} = 1.45$  in.

Rainfall Intensity : 3.12 in/hr

### RATIONAL METHOD

The Rational Method was used to size the storm drain conveyances for the site. All swales and pipes are sized using the flow rate from the 100-year storm event. Runoff Coefficients were determined with reference to the Napa County Road and Streets Standards, see Appendix A for reference.

Impervious Area : 0.90

Pervious/Landscaped Areas : 0.40

Drainage areas for the constructed conditions were developed and are presented in the Hydrology Map in Appendix D. Flow rate calculations for each area were developed based on the Rational Method formula.

Rational Method Formula :  $Q = CiA$

$Q$  = Flowrate (cubic feet per second)

$A$  = Area (acres)

$C$  = Runoff Coefficient

$i$  = 100-year Rainfall Intensity

### FLOWRATE CALCULATIONS

100 YEAR STORM INTERVAL

Runoff:  $Q = CiA$

$Q = 0.78 * 3.12 \text{ in/hr} * 2.15 \text{ Ac} = 5.26 \text{ cfs}$

### STORM DRAIN SIZING

Storm drains are designed to convey the 100-year storm event flow rate calculated using the Rational Method. The pipe sizes were calculated using Manning's Equation as shown below. See Appendix A for flow calculations.

$$\text{Manning's Equation} : Q = \frac{1.49}{n} AR^{2/3} S^{1/2}$$

$$A = \pi \left( \frac{D}{2} \right)^2$$

3

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$$R = \frac{A}{\pi D}$$

D = diameter of pipe (feet)

n = 0.012 (Manning's Roughness Coefficient)

S = 0.005 (Slope)

Pipe sizes were selected based on the sub-region flow rate for the 100-year flow being conveyed with the pipe at or less than 90% full. See Appendix B for pipe capacity report for the 18 inch storm drain outlet for the site.

## CONCLUSION

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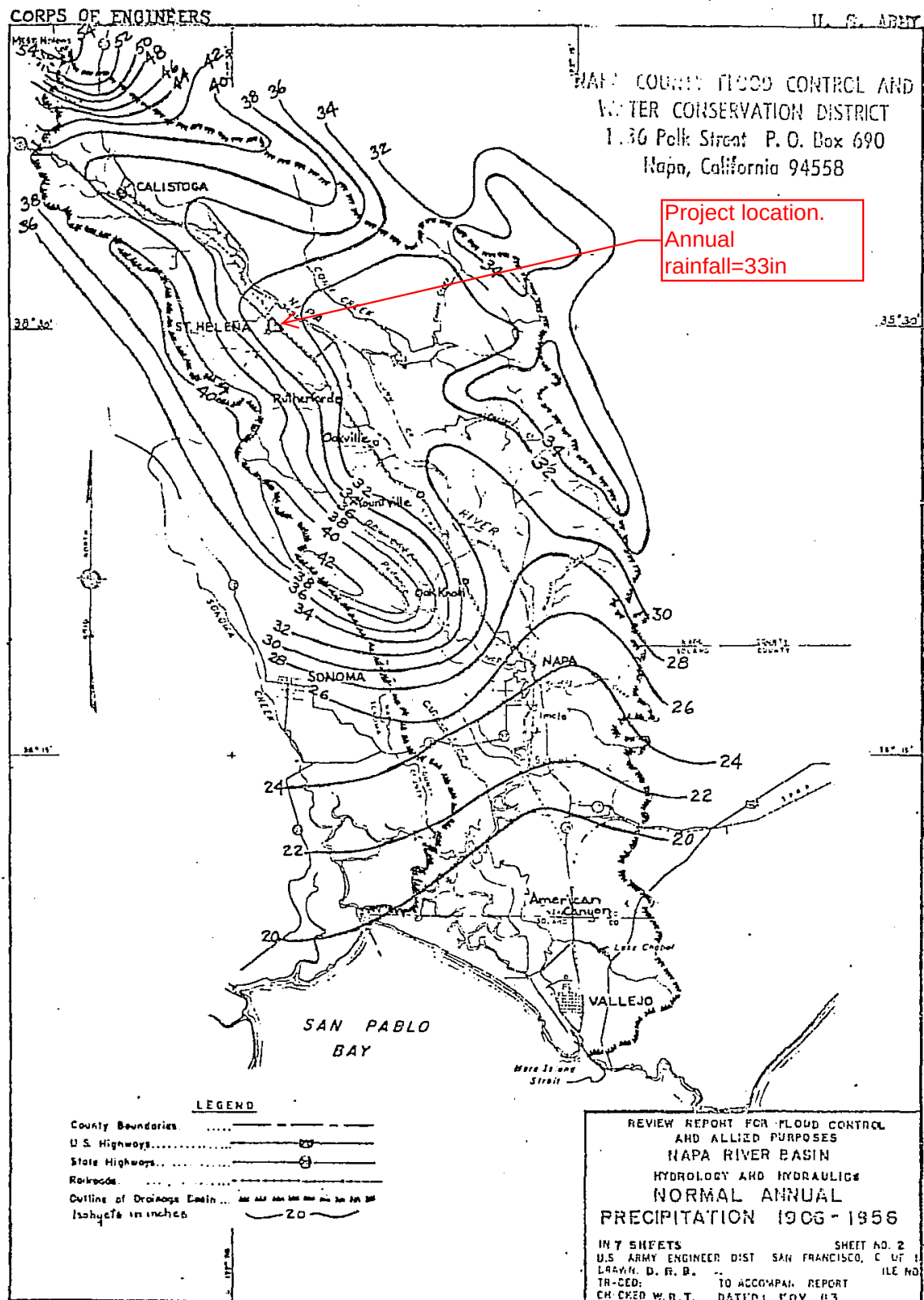
Based on this analysis, the post- curve number values, the flowrate, and the volume match the pre-project conditions. The properties off-site shall not be adversely affected, since there shall be no increase in runoff resulting from the 10-year storm event for the proposed improvements.

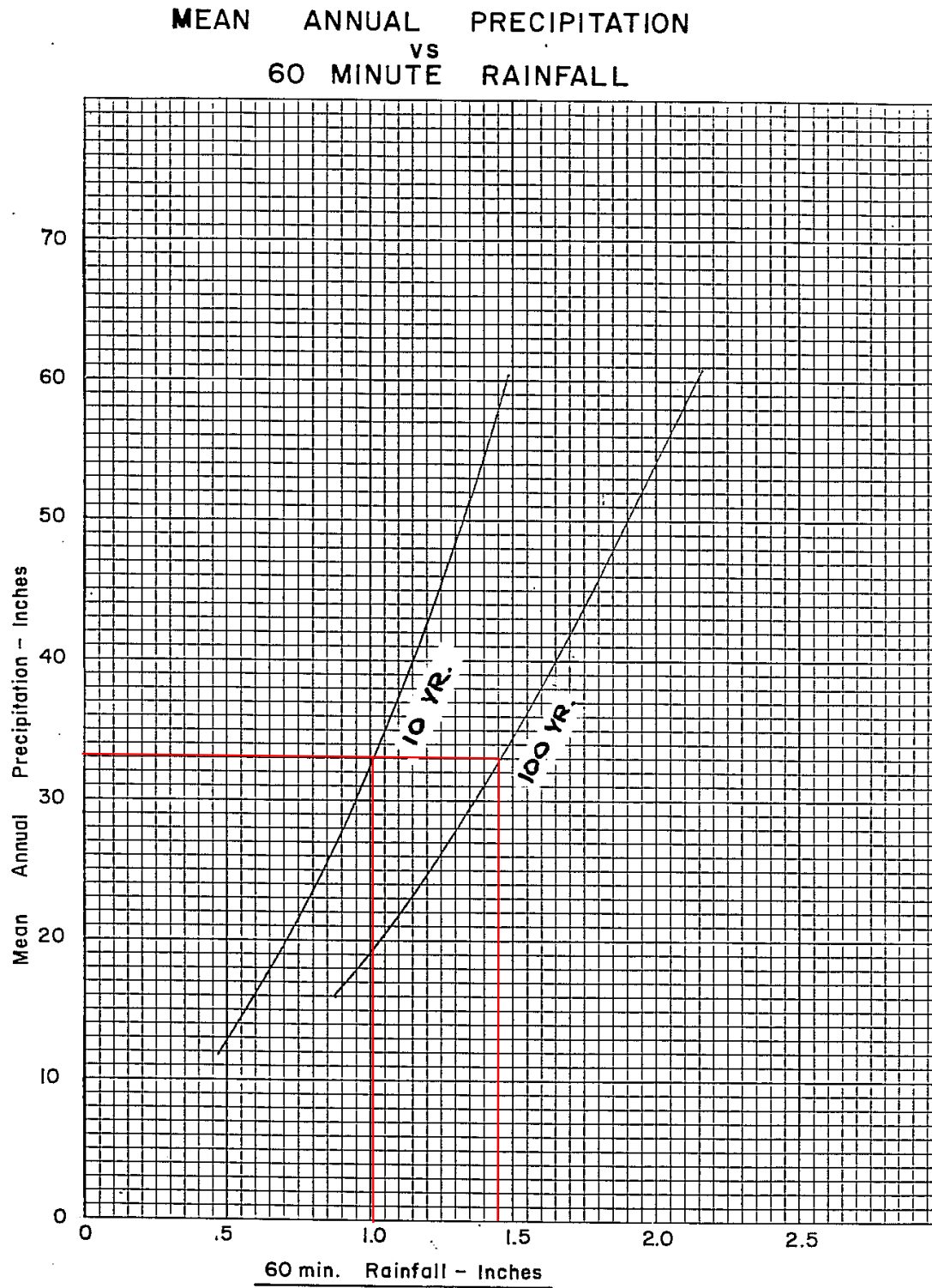
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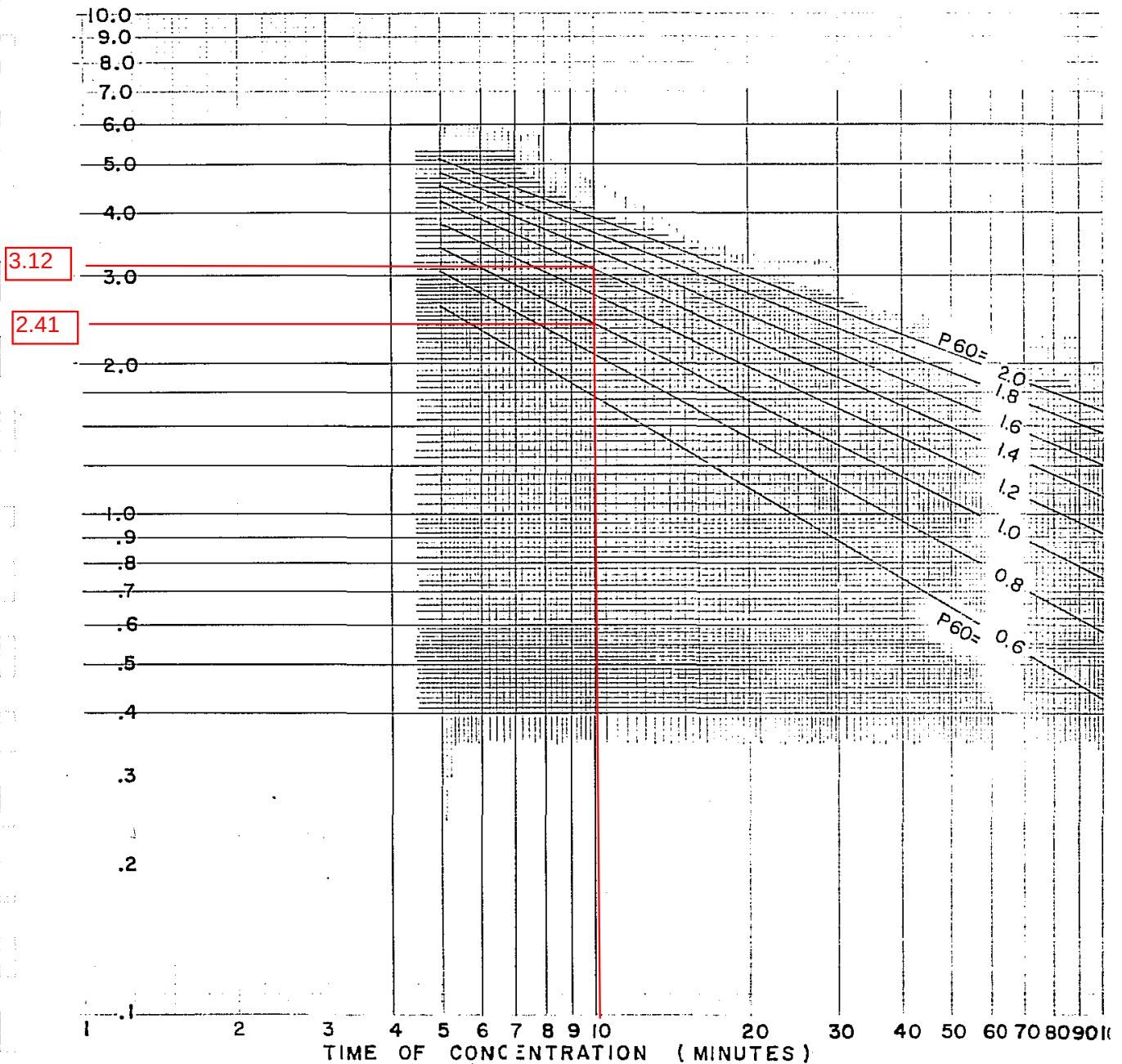
## **APPENDIX A: PARAMETER SUPPORT**





12-185

# INTENSITY - DURATION CHART



Based on figure 7-811.6 (-8-64)  
 State of California  
 Division of Highways  
 Planning Manual



NOAA Atlas 14, Volume 6, Version 2  
 Location name: Saint Helena, California, US\*  
 Latitude: 38.5134°, Longitude: -122.4756°  
 Elevation: 251 ft\*  
 \* source: Google Maps



### POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

[PF tabular](#) | [PF graphical](#) | [Maps & aeriels](#)

### PF tabular

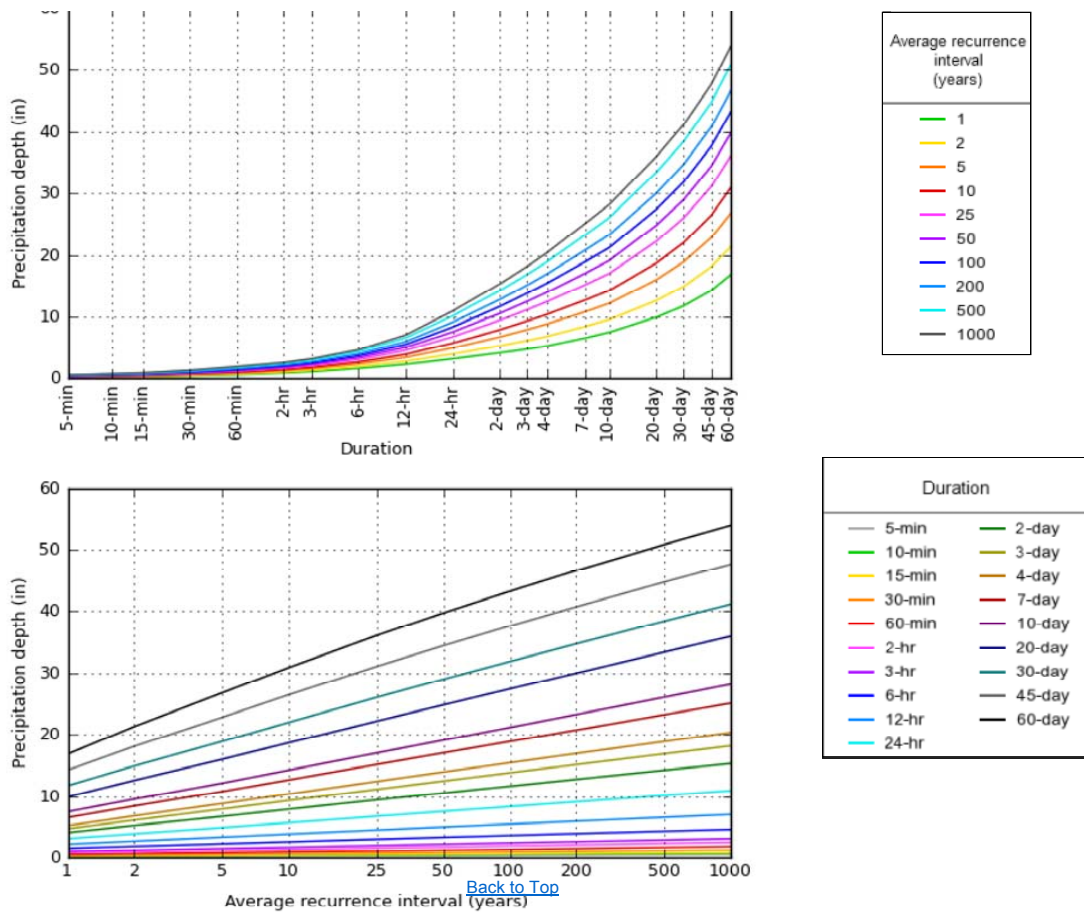
| PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches) <sup>1</sup> |                                     |                        |                        |                        |                        |                        |                        |                        |                        |                        |
|----------------------------------------------------------------------------------------------------------|-------------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| Duration                                                                                                 | Average recurrence interval (years) |                        |                        |                        |                        |                        |                        |                        |                        |                        |
|                                                                                                          | 1                                   | 2                      | 5                      | 10                     | 25                     | 50                     | 100                    | 200                    | 500                    | 1000                   |
| 5-min                                                                                                    | 0.133<br>(0.118–0.151)              | 0.163<br>(0.145–0.185) | 0.202<br>(0.179–0.231) | 0.235<br>(0.206–0.270) | 0.279<br>(0.236–0.334) | 0.314<br>(0.259–0.385) | 0.349<br>(0.280–0.440) | 0.386<br>(0.299–0.502) | 0.436<br>(0.323–0.595) | 0.475<br>(0.339–0.674) |
| 10-min                                                                                                   | 0.191<br>(0.170–0.216)              | 0.233<br>(0.207–0.265) | 0.290<br>(0.257–0.331) | 0.337<br>(0.295–0.388) | 0.400<br>(0.338–0.479) | 0.450<br>(0.371–0.551) | 0.500<br>(0.401–0.631) | 0.553<br>(0.429–0.720) | 0.625<br>(0.463–0.853) | 0.681<br>(0.485–0.966) |
| 15-min                                                                                                   | 0.230<br>(0.205–0.262)              | 0.282<br>(0.251–0.321) | 0.351<br>(0.311–0.400) | 0.407<br>(0.357–0.469) | 0.484<br>(0.409–0.579) | 0.544<br>(0.448–0.667) | 0.605<br>(0.485–0.763) | 0.669<br>(0.519–0.870) | 0.756<br>(0.560–1.03)  | 0.824<br>(0.587–1.17)  |
| 30-min                                                                                                   | 0.348<br>(0.310–0.396)              | 0.427<br>(0.379–0.485) | 0.530<br>(0.469–0.605) | 0.615<br>(0.540–0.708) | 0.732<br>(0.618–0.875) | 0.822<br>(0.677–1.01)  | 0.915<br>(0.733–1.15)  | 1.01<br>(0.785–1.32)   | 1.14<br>(0.846–1.56)   | 1.25<br>(0.887–1.77)   |
| 60-min                                                                                                   | 0.518<br>(0.461–0.588)              | 0.634<br>(0.563–0.721) | 0.788<br>(0.698–0.899) | 0.914<br>(0.802–1.05)  | 1.09<br>(0.918–1.30)   | 1.22<br>(1.01–1.50)    | 1.36<br>(1.09–1.71)    | 1.50<br>(1.17–1.96)    | 1.70<br>(1.26–2.32)    | 1.85<br>(1.32–2.63)    |
| 2-hr                                                                                                     | 0.793<br>(0.706–0.901)              | 0.963<br>(0.855–1.10)  | 1.18<br>(1.05–1.35)    | 1.36<br>(1.19–1.56)    | 1.59<br>(1.34–1.90)    | 1.76<br>(1.45–2.16)    | 1.93<br>(1.55–2.44)    | 2.11<br>(1.64–2.75)    | 2.34<br>(1.73–3.20)    | 2.52<br>(1.79–3.57)    |
| 3-hr                                                                                                     | 1.02<br>(0.909–1.16)                | 1.24<br>(1.10–1.41)    | 1.51<br>(1.34–1.72)    | 1.72<br>(1.51–1.98)    | 2.01<br>(1.69–2.40)    | 2.22<br>(1.83–2.72)    | 2.43<br>(1.94–3.06)    | 2.63<br>(2.05–3.43)    | 2.91<br>(2.15–3.97)    | 3.11<br>(2.22–4.42)    |
| 6-hr                                                                                                     | 1.55<br>(1.38–1.76)                 | 1.88<br>(1.67–2.13)    | 2.29<br>(2.02–2.61)    | 2.61<br>(2.29–3.00)    | 3.02<br>(2.55–3.62)    | 3.33<br>(2.74–4.08)    | 3.63<br>(2.91–4.58)    | 3.93<br>(3.05–5.11)    | 4.31<br>(3.19–5.88)    | 4.60<br>(3.28–6.52)    |
| 12-hr                                                                                                    | 2.22<br>(1.98–2.52)                 | 2.72<br>(2.42–3.10)    | 3.35<br>(2.97–3.83)    | 3.85<br>(3.38–4.44)    | 4.50<br>(3.80–5.39)    | 4.99<br>(4.11–6.11)    | 5.46<br>(4.38–6.88)    | 5.94<br>(4.61–7.72)    | 6.55<br>(4.85–8.94)    | 7.02<br>(5.00–9.95)    |
| 24-hr                                                                                                    | 3.12<br>(2.80–3.54)                 | 3.90<br>(3.50–4.43)    | 4.89<br>(4.38–5.57)    | 5.68<br>(5.06–6.51)    | 6.72<br>(5.82–7.92)    | 7.51<br>(6.39–9.00)    | 8.28<br>(6.91–10.1)    | 9.07<br>(7.39–11.4)    | 10.1<br>(7.95–13.1)    | 10.9<br>(8.32–14.5)    |
| 2-day                                                                                                    | 4.09<br>(3.67–4.64)                 | 5.24<br>(4.71–5.96)    | 6.70<br>(6.01–7.63)    | 7.86<br>(6.99–9.01)    | 9.37<br>(8.12–11.0)    | 10.5<br>(8.94–12.6)    | 11.6<br>(9.69–14.2)    | 12.7<br>(10.4–15.9)    | 14.2<br>(11.2–18.4)    | 15.3<br>(11.7–20.4)    |
| 3-day                                                                                                    | 4.70<br>(4.23–5.34)                 | 6.11<br>(5.48–6.94)    | 7.88<br>(7.06–8.97)    | 9.27<br>(8.26–10.6)    | 11.1<br>(9.61–13.1)    | 12.5<br>(10.6–14.9)    | 13.8<br>(11.5–16.9)    | 15.1<br>(12.3–18.9)    | 16.8<br>(13.3–21.8)    | 18.1<br>(13.9–24.2)    |
| 4-day                                                                                                    | 5.21<br>(4.68–5.91)                 | 6.78<br>(6.09–7.71)    | 8.77<br>(7.86–9.99)    | 10.3<br>(9.20–11.9)    | 12.4<br>(10.7–14.6)    | 13.9<br>(11.8–16.7)    | 15.4<br>(12.9–18.8)    | 16.9<br>(13.8–21.2)    | 18.9<br>(14.8–24.4)    | 20.3<br>(15.5–27.1)    |
| 7-day                                                                                                    | 6.52<br>(5.86–7.40)                 | 8.38<br>(7.52–9.52)    | 10.7<br>(9.63–12.2)    | 12.6<br>(11.2–14.5)    | 15.1<br>(13.1–17.8)    | 17.0<br>(14.5–20.4)    | 18.9<br>(15.7–23.1)    | 20.7<br>(16.9–25.9)    | 23.2<br>(18.3–30.1)    | 25.1<br>(19.2–33.5)    |
| 10-day                                                                                                   | 7.45<br>(6.70–8.46)                 | 9.49<br>(8.53–10.8)    | 12.1<br>(10.9–13.8)    | 14.2<br>(12.6–16.3)    | 17.0<br>(14.7–20.0)    | 19.1<br>(16.2–22.8)    | 21.1<br>(17.6–25.9)    | 23.2<br>(18.9–29.1)    | 26.0<br>(20.5–33.7)    | 28.1<br>(21.5–37.5)    |
| 20-day                                                                                                   | 9.88<br>(8.88–11.2)                 | 12.6<br>(11.3–14.3)    | 16.0<br>(14.3–18.2)    | 18.6<br>(16.6–21.4)    | 22.2<br>(19.2–26.1)    | 24.8<br>(21.1–29.7)    | 27.4<br>(22.8–33.5)    | 30.0<br>(24.4–37.5)    | 33.4<br>(26.3–43.2)    | 35.9<br>(27.5–47.9)    |
| 30-day                                                                                                   | 11.7<br>(10.5–13.3)                 | 14.9<br>(13.4–16.9)    | 18.9<br>(16.9–21.5)    | 22.0<br>(19.6–25.2)    | 26.0<br>(22.5–30.6)    | 29.0<br>(24.7–34.7)    | 31.8<br>(26.6–38.9)    | 34.7<br>(28.3–43.4)    | 38.4<br>(30.2–49.8)    | 41.2<br>(31.5–54.9)    |
| 45-day                                                                                                   | 14.2<br>(12.8–16.1)                 | 18.1<br>(16.2–20.5)    | 22.8<br>(20.4–26.0)    | 26.4<br>(23.5–30.3)    | 31.1<br>(26.9–36.6)    | 34.4<br>(29.3–41.2)    | 37.6<br>(31.4–46.0)    | 40.7<br>(33.2–51.0)    | 44.7<br>(35.2–58.0)    | 47.6<br>(36.4–63.5)    |
| 60-day                                                                                                   | 16.8<br>(15.1–19.1)                 | 21.3<br>(19.1–24.2)    | 26.7<br>(24.0–30.5)    | 30.9<br>(27.5–35.4)    | 36.0<br>(31.2–42.5)    | 39.7<br>(33.8–47.6)    | 43.2<br>(36.1–52.9)    | 46.6<br>(38.0–58.3)    | 50.8<br>(40.0–65.9)    | 53.9<br>(41.2–71.9)    |

<sup>1</sup> Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).  
 Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.  
 Please refer to NOAA Atlas 14 document for more information.

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### PF graphical



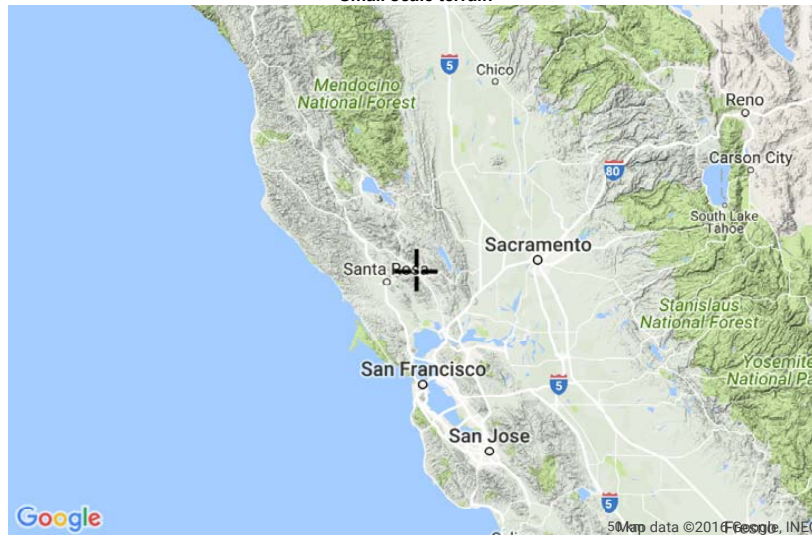


NOAA Atlas 14, Volume 6, Version 2

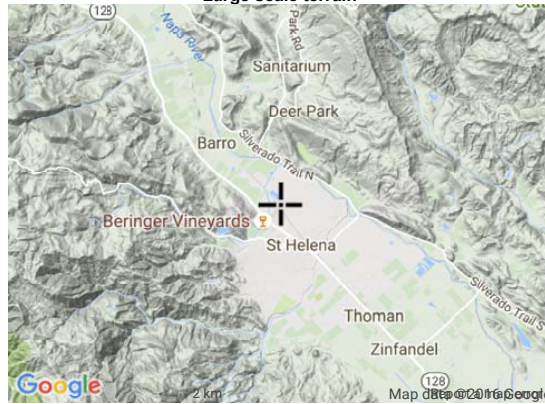
### Maps & aeriels

Created (GMT): Wed Aug 31 22:46:25 2016

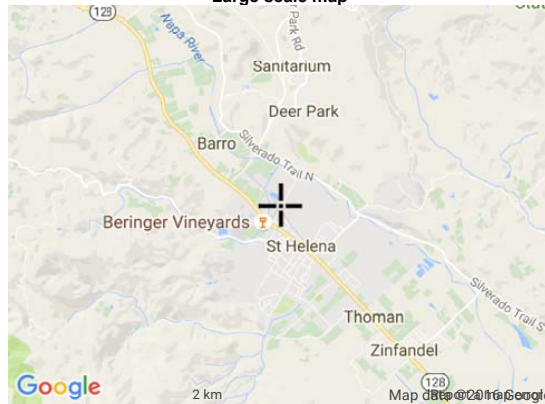
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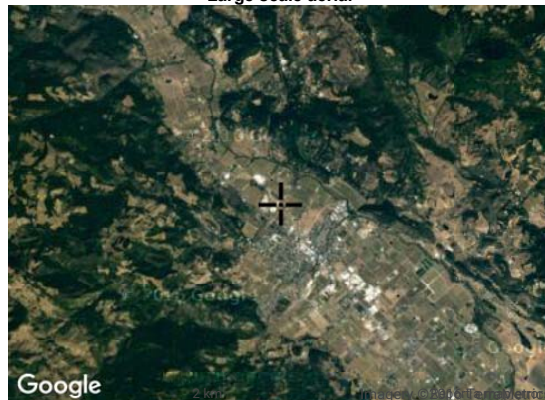
Large scale terrain



Large scale map



Large scale aerial

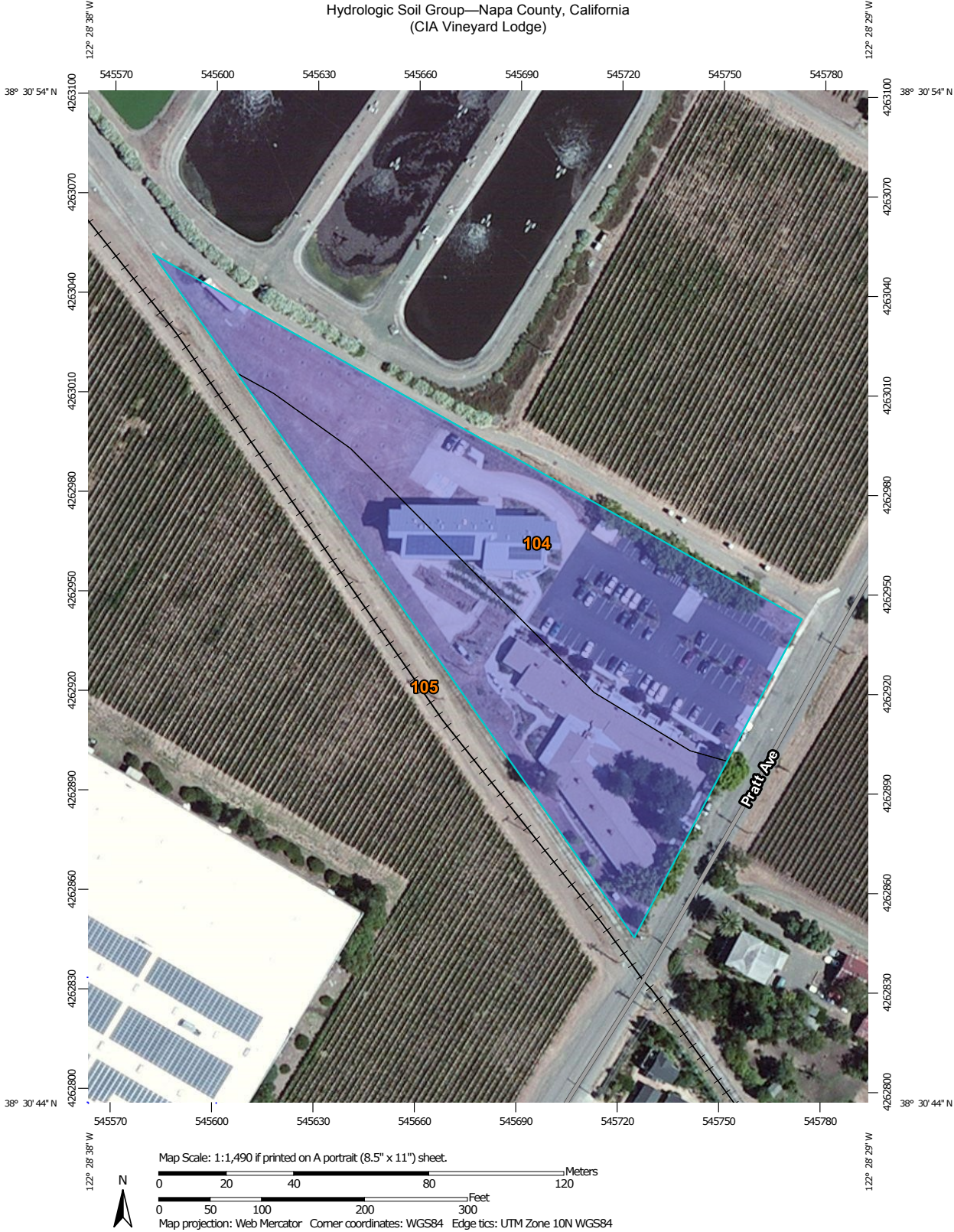


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[US Department of Commerce](#)  
[National Oceanic and Atmospheric Administration](#)  
[National Weather Service](#)  
[National Water Center](#)  
 1325 East West Highway  
 Silver Spring, MD 20910





## MAP LEGEND

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

**Warning:** Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Napa County, California  
Survey Area Data: Version 8, Sep 23, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 14, 2011—Aug 15, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

**Area of Interest (AOI)**  
 Area of Interest (AOI)

**Soils**  
 Soil Rating Polygons  
 A  
 A/D  
 B  
 B/D  
 C  
 C/D  
 D  
 Not rated or not available

**Soil Rating Lines**  
 A  
 A/D  
 B  
 B/D  
 C  
 C/D  
 D  
 Not rated or not available

**Water Features**  
 Streams and Canals

**Transportation**  
 Rails  
 Interstate Highways  
 US Routes  
 Major Roads  
 Local Roads

**Background**  
 Aerial Photography

**Soil Rating Points**  
 A  
 A/D  
 B  
 B/D

## Hydrologic Soil Group

| Hydrologic Soil Group— Summary by Map Unit — Napa County, California (CA055) |                                       |        |              |                |
|------------------------------------------------------------------------------|---------------------------------------|--------|--------------|----------------|
| Map unit symbol                                                              | Map unit name                         | Rating | Acres in AOI | Percent of AOI |
| 104                                                                          | Bale clay loam, 0 to 2 percent slopes | B      | 1.7          | 57.7%          |
| 105                                                                          | Bale clay loam, 2 to 5 percent slopes | B      | 1.3          | 42.3%          |
| <b>Totals for Area of Interest</b>                                           |                                       |        | <b>3.0</b>   | <b>100.0%</b>  |

## Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

## Rating Options

*Aggregation Method:* Dominant Condition

*Component Percent Cutoff: None Specified*

*Tie-break Rule: Higher*

Chapter 2

Estimating Runoff

Technical Release 55  
Urban Hydrology for Small Watersheds

**Table 2-2a** Runoff curve numbers for urban areas <sup>1/</sup>

| Cover description                                                                                                                          |                                               | Curve numbers for hydrologic soil group |    |    |    |
|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|-----------------------------------------|----|----|----|
| Cover type and hydrologic condition                                                                                                        | Average percent impervious area <sup>2/</sup> | A                                       | B  | C  | D  |
| <i>Fully developed urban areas (vegetation established)</i>                                                                                |                                               |                                         |    |    |    |
| Open space (lawns, parks, golf courses, cemeteries, etc.) <sup>3/</sup> :                                                                  |                                               |                                         |    |    |    |
| Poor condition (grass cover < 50%) .....                                                                                                   |                                               | 68                                      | 79 | 86 | 89 |
| Fair condition (grass cover 50% to 75%) .....                                                                                              |                                               | 49                                      | 69 | 79 | 84 |
| Good condition (grass cover > 75%) .....                                                                                                   |                                               | 39                                      | 61 | 74 | 80 |
| Impervious areas:                                                                                                                          |                                               |                                         |    |    |    |
| Paved parking lots, roofs, driveways, etc.<br>(excluding right-of-way) .....                                                               |                                               | 98                                      | 98 | 98 | 98 |
| Streets and roads:                                                                                                                         |                                               |                                         |    |    |    |
| Paved; curbs and storm sewers (excluding<br>right-of-way) .....                                                                            |                                               | 98                                      | 98 | 98 | 98 |
| Paved; open ditches (including right-of-way) .....                                                                                         |                                               | 83                                      | 89 | 92 | 93 |
| Gravel (including right-of-way) .....                                                                                                      |                                               | 76                                      | 85 | 89 | 91 |
| Dirt (including right-of-way) .....                                                                                                        |                                               | 72                                      | 82 | 87 | 89 |
| Western desert urban areas:                                                                                                                |                                               |                                         |    |    |    |
| Natural desert landscaping (pervious areas only) <sup>4/</sup> .....                                                                       |                                               | 63                                      | 77 | 85 | 88 |
| Artificial desert landscaping (impervious weed barrier,<br>desert shrub with 1- to 2-inch sand or gravel mulch<br>and basin borders) ..... |                                               | 96                                      | 96 | 96 | 96 |
| Urban districts:                                                                                                                           |                                               |                                         |    |    |    |
| Commercial and business .....                                                                                                              | 85                                            | 89                                      | 92 | 94 | 95 |
| Industrial .....                                                                                                                           | 72                                            | 81                                      | 88 | 91 | 93 |
| Residential districts by average lot size:                                                                                                 |                                               |                                         |    |    |    |
| 1/8 acre or less (town houses) .....                                                                                                       | 65                                            | 77                                      | 85 | 90 | 92 |
| 1/4 acre .....                                                                                                                             | 38                                            | 61                                      | 75 | 83 | 87 |
| 1/3 acre .....                                                                                                                             | 30                                            | 57                                      | 72 | 81 | 86 |
| 1/2 acre .....                                                                                                                             | 25                                            | 54                                      | 70 | 80 | 85 |
| 1 acre .....                                                                                                                               | 20                                            | 51                                      | 68 | 79 | 84 |
| 2 acres .....                                                                                                                              | 12                                            | 46                                      | 65 | 77 | 82 |

*Developing urban areas*

|                                                                                |    |    |    |    |
|--------------------------------------------------------------------------------|----|----|----|----|
| Newly graded areas<br>(pervious areas only, no vegetation) <sup>5/</sup> ..... | 77 | 86 | 91 | 94 |
|--------------------------------------------------------------------------------|----|----|----|----|

Idle lands (CN's are determined using cover types  
similar to those in table 2-2c).

<sup>1</sup> Average runoff condition, and  $I_a = 0.2S$ .

<sup>2</sup> The average percent impervious area shown was used to develop the composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using figure 2-3 or 2-4.

<sup>3</sup> CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.

<sup>4</sup> Composite CN's for natural desert landscaping should be computed using figures 2-3 or 2-4 based on the impervious area percentage (CN = 98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.

<sup>5</sup> Composite CN's to use for the design of temporary measures during grading and construction should be computed using figure 2-3 or 2-4 based on the degree of development (impervious area percentage) and the CN's for the newly graded pervious areas.



CIA-VINEYARD LODGE  
Project No. 2016096  
September 2, 2016

**SUMMIT ENGINEERING, INC.**  
Hydrology and Hydraulic Calculations  
BY: CIP CHK: MS

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## **APPENDIX B: HYDROGRAPHS & HYDRAULICS**



# Hydrograph Report

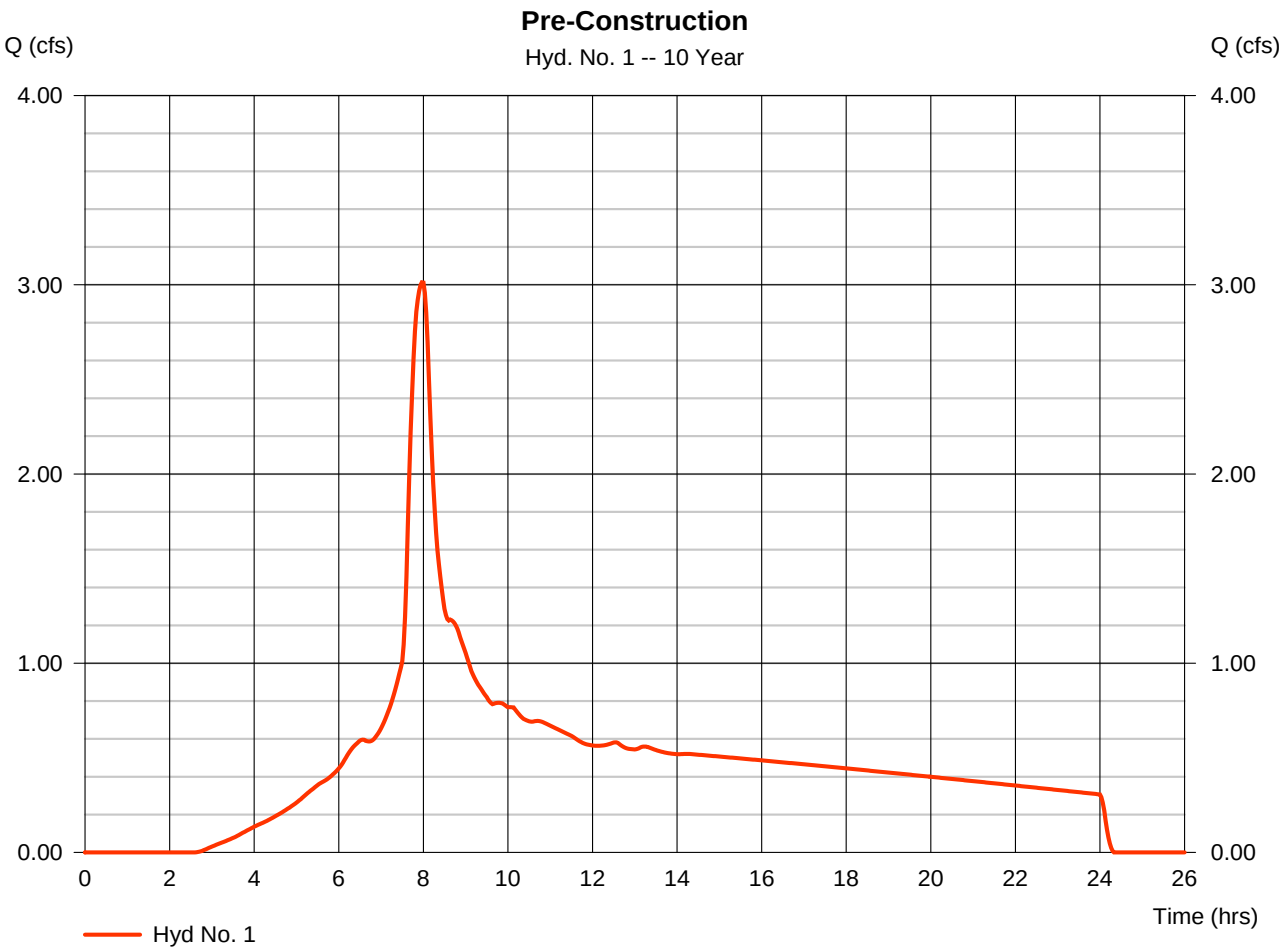
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2015 by Autodesk, Inc. v10.4 Wednesday, 08 / 31 / 2016

## Hyd. No. 1

### Pre-Construction

|                 |   |            |                    |   |             |
|-----------------|---|------------|--------------------|---|-------------|
| Hydrograph type | = | SCS Runoff | Peak discharge     | = | 3.013 cfs   |
| Storm frequency | = | 10 yrs     | Time to peak       | = | 7.97 hrs    |
| Time interval   | = | 2 min      | Hyd. volume        | = | 42,737 cuft |
| Drainage area   | = | 2.950 ac   | Curve number       | = | 84*         |
| Basin Slope     | = | 0.0 %      | Hydraulic length   | = | 0 ft        |
| Tc method       | = | User       | Time of conc. (Tc) | = | 10.00 min   |
| Total precip.   | = | 5.65 in    | Distribution       | = | Type IA     |
| Storm duration  | = | 24 hrs     | Shape factor       | = | 484         |

\* Composite (Area/CN) = [(1.520 x 98) + (0.120 x 65) + (1.310 x 69)] / 2.950



# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2015 by Autodesk, Inc. v10.4

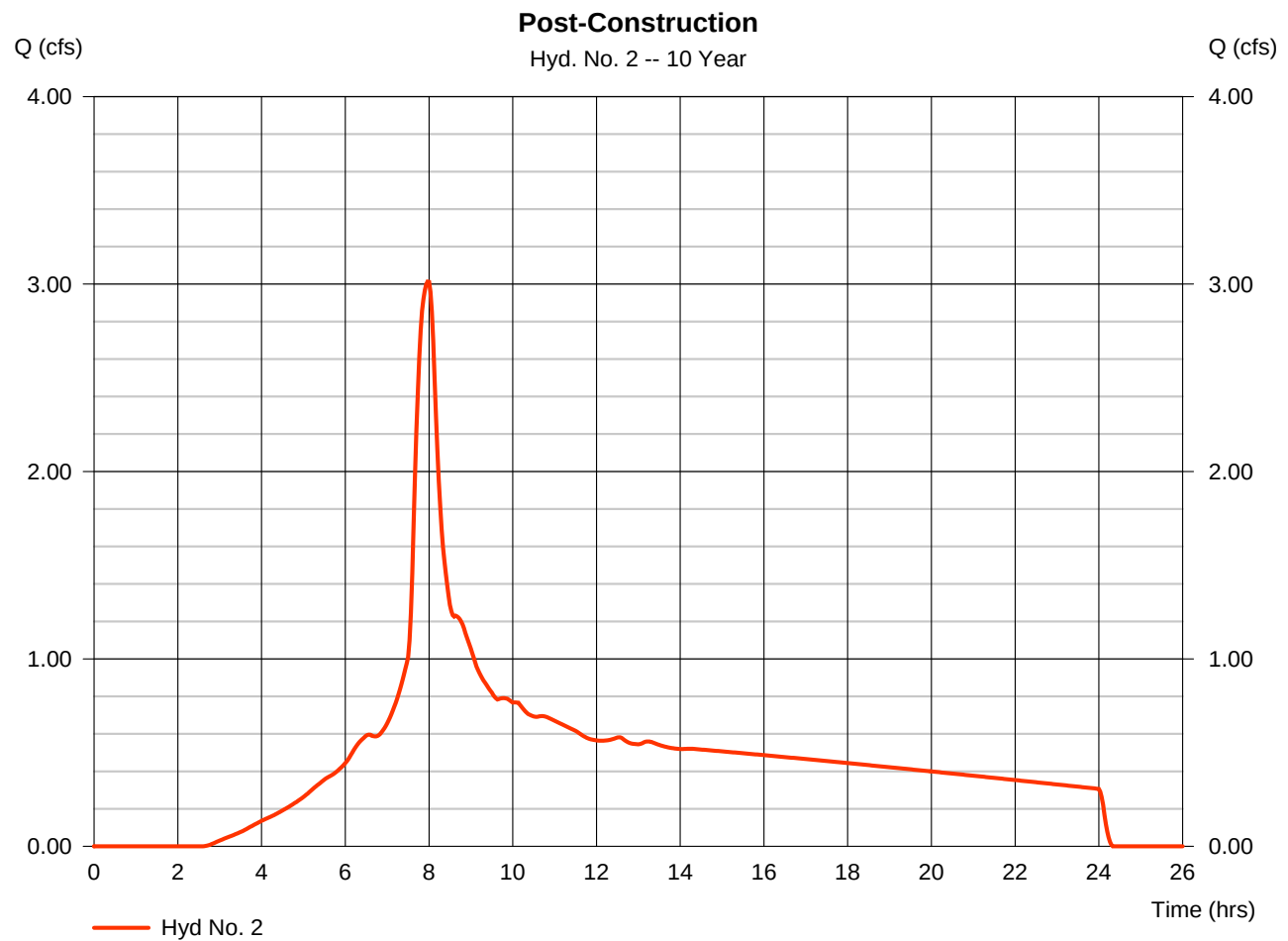
Thursday, 09 / 1 / 2016

## Hyd. No. 2

### Post-Construction

|                 |              |                    |               |
|-----------------|--------------|--------------------|---------------|
| Hydrograph type | = SCS Runoff | Peak discharge     | = 3.013 cfs   |
| Storm frequency | = 10 yrs     | Time to peak       | = 7.97 hrs    |
| Time interval   | = 2 min      | Hyd. volume        | = 42,737 cuft |
| Drainage area   | = 2.950 ac   | Curve number       | = 84*         |
| Basin Slope     | = 0.0 %      | Hydraulic length   | = 0 ft        |
| Tc method       | = User       | Time of conc. (Tc) | = 10.00 min   |
| Total precip.   | = 5.65 in    | Distribution       | = Type IA     |
| Storm duration  | = 24 hrs     | Shape factor       | = 484         |

\* Composite (Area/CN) =  $[(1.620 \times 98) + (0.880 \times 69) + (0.450 \times 65)] / 2.950$



# Channel Report

Hydraflow Express Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc.

Thursday, Sep 1 2016

## 18-inch Outflow Pipe - Q100

### Circular

Diameter (ft) = 1.50

Invert Elev (ft) = 100.00

Slope (%) = 0.50

N-Value = 0.012

### Calculations

Compute by: Known Q

Known Q (cfs) = 5.26

### Highlighted

Depth (ft) = 0.89

Q (cfs) = 5.260

Area (sqft) = 1.09

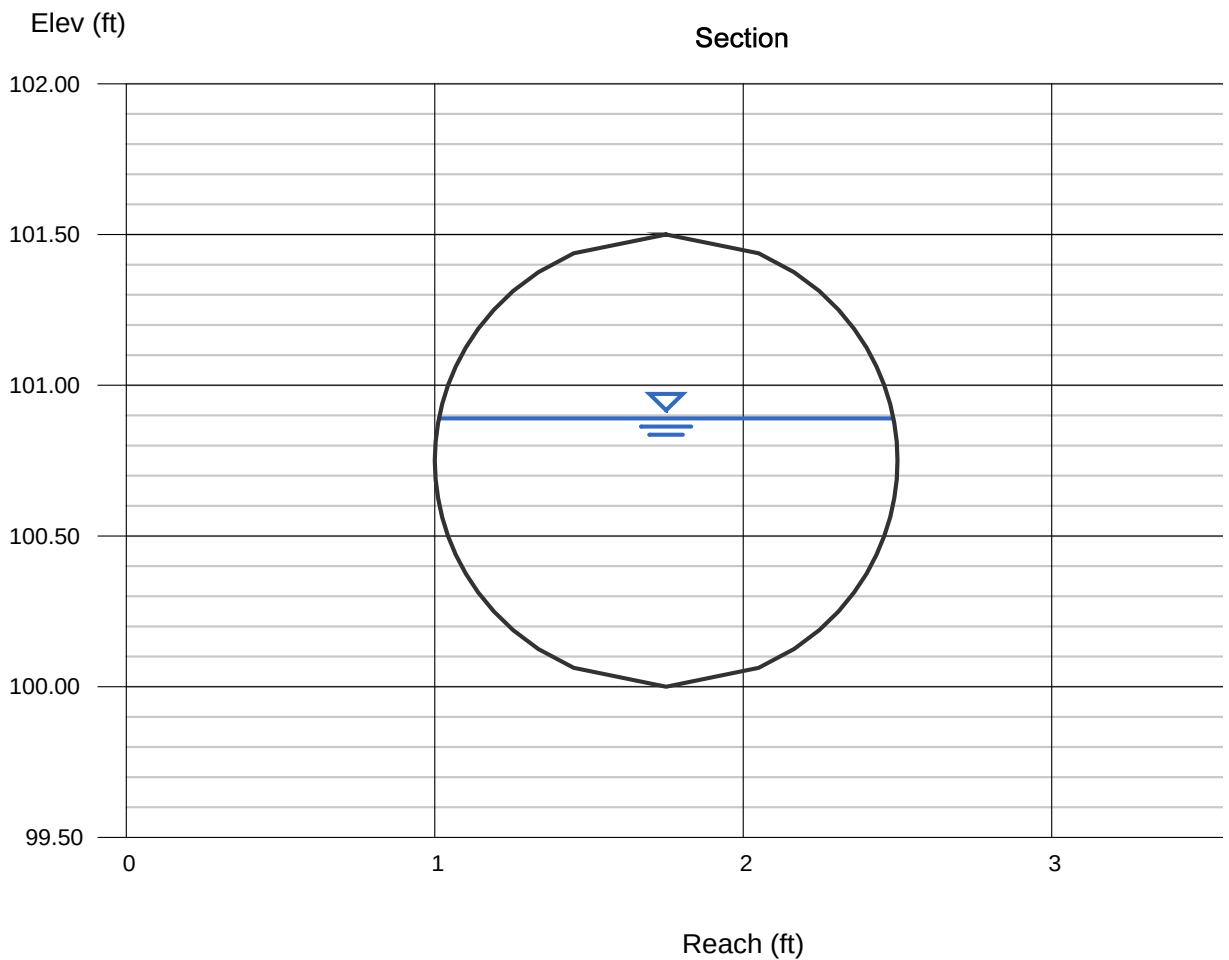
Velocity (ft/s) = 4.81

Wetted Perim (ft) = 2.64

Crit Depth, Yc (ft) = 0.88

Top Width (ft) = 1.47

EGL (ft) = 1.25



CIA-VINEYARD LODGE  
Project No. 2016096  
September 2, 2016

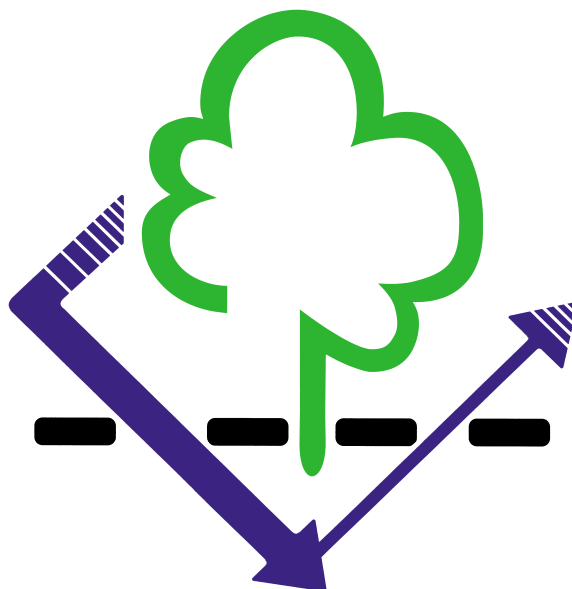
**SUMMIT ENGINEERING, INC.**  
Hydrology and Hydraulic Calculations  
BY: CIP CHK: MS

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## **APPENDIX C: PERVIOUS PAVER CURVE NUMBER DOCUMENTATION**

# **SF-RIMA™**

## **A PERMEABLE PAVING STONE SYSTEM**



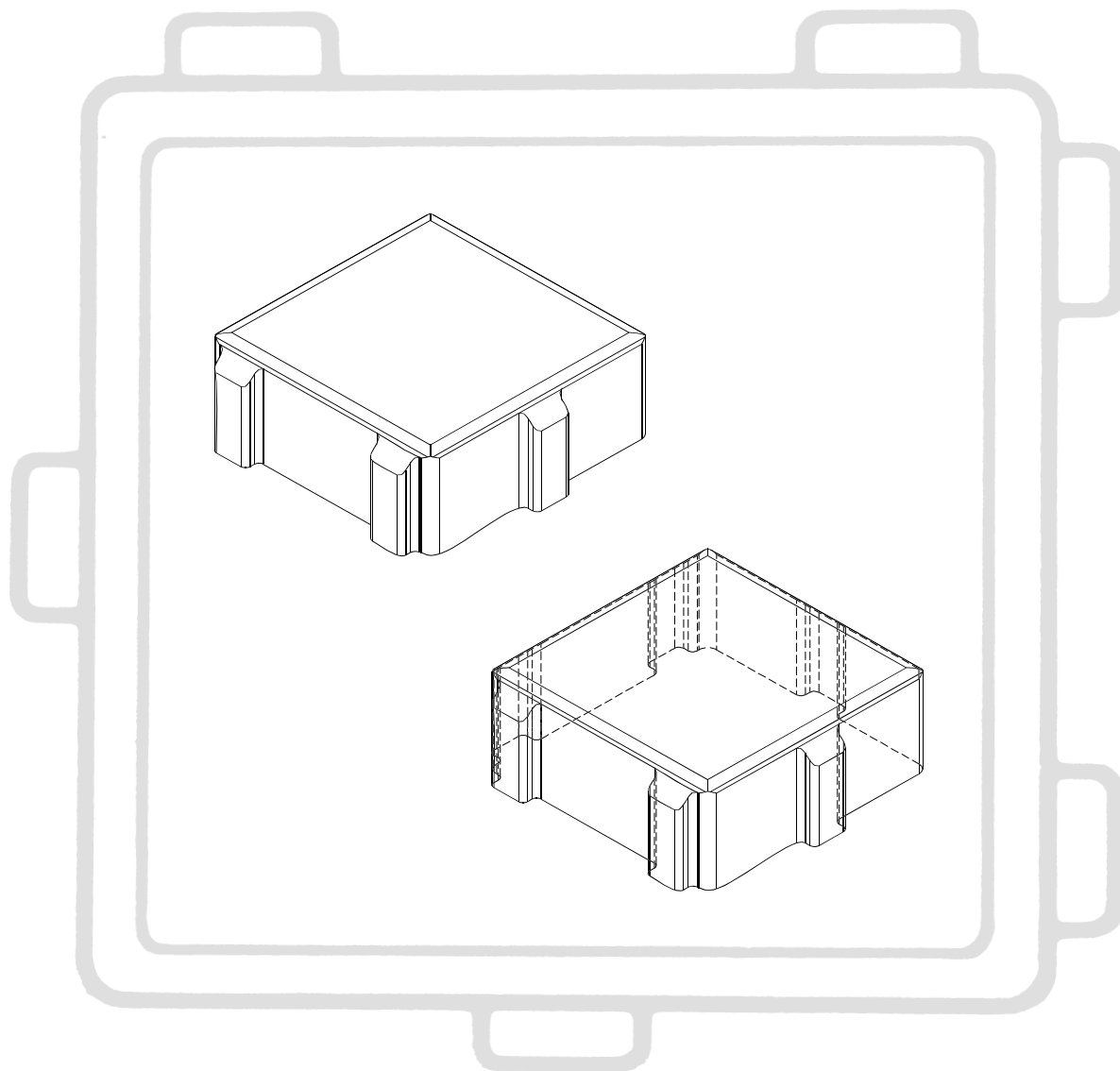
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**Report Prepared for:**

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**Mississauga, Ontario**  
**Canada**

**June 1999**



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## SF-RIMA™ PERMEABLE PAVING STONE SYSTEM

### INTRODUCTION

Storm-water management is a fundamental aspect of facility engineering, landscape architecture, and site development. Today it is tightly regulated by a variety of federal, state, and local requirements that seek to control amount of runoff discharged into waterways and the quality of the discharge. Depending on the specific locality these regulations may require on-site storm-water retention with controlled rate or quality of discharge limits (or both), mandatory cleaning of discharge (e.g. oil-water separators), limits on the percentage of an area that may be developed, or special fees or taxes on any covered or paved areas that are built.

However, conventional storm-water practices have not proven entirely satisfactory. Professor Ferguson of the University of Georgia noted in the preface to his revolutionary new text on storm-water control (Ferguson 1994) that

*Too many American cities are caught up in stormwater management practices that are self-defeating and destructive. Too many are clinging to conventions inherited from previous generations despite the growth of scientific knowledge and development of environmental values.*

Storm-water infiltration whereby storm-water management systems are specifically designed to return the storm-water back into the underlying soil rather than allowing it to escape as surface runoff is the most promising new concept for dealing with this issue. Storm-water infiltration reduces pollutant discharge, sedimentation of downstream channels, helps prevent downstream flooding, nourishes existing or develops new wetland areas, and recharges the existing ground-water system. This concept of storm-water management is far more economical and environmentally sustainable than more conventional methods of retention basins and storm sewers. It has been practiced effectively for over a half century in the U.S. with examples in the Southwest where it was used to recharge alluvial aquifers, in various urban watersheds (e.g., Fresno, Los Angeles, and Long Island) and other areas (e.g., Florida, Maryland, Minnesota, and Texas). It is now appropriate for this sound concept to be used more widely.

### THE CONCEPT OF A PERMEABLE PAVEMENT

Paved areas are essentially impermeable and are major contributors to storm-water control problems. Not only must all of the water falling on the paved area be collected and handled in some manner, it is a major contributor of pollutants and sediments that degrade natural waters. Ideally, if a pavement could be made permeable so that water simply reentered the soil, a significant portion of the storm-water problem would be solved. However, there are some technical difficulties with achieving this (which in many cases can be overcome), and



existing permeable pavement surfaces are less than ideal. They tend to be expensive and difficult to maintain, porous asphalt concrete often has stability problems under turning or braking loads and may be vulnerable to stripping (emulsification of the asphalt binder in water), porous or “no fines” portland cement concrete tend to be vulnerable to damage by freezing and thawing (Korhonen and Bayer 1989), and precast portland cement concrete lattice pavers or turf pavers are generally not suitable for sustained traffic.

## **SF-RIMA<sup>™</sup>, A NEW PRODUCT FOR PERMEABLE PAVEMENTS**

SF-Rima<sup>™</sup> is a high-quality portland cement concrete paving stone that can be assembled to provide a high quality pavement surface. The paving stone is 196 mm by 196 mm (7.7 in. by 7.7 in.) in plan and 80-mm (3.1-in.) thick. Protruding from each side are 12-mm (0.5 in.) deep and 30-mm (1.2-in.) wide placement spacers (Figure 1) that provide an open joint between the paving stone (Figure 2). These placement spacers ensure that the typical SF-Rima<sup>™</sup> surface will be composed of approximately 10 percent joint area that will be available for storm-water drainage. When these joints are filled with appropriately permeable granular material and the underlying layers are properly designed for drainage, storage, and percolation over time, substantial portions of the storm-water falling on a SF-Rima<sup>™</sup> surface can be diverted into the pavement surface where it can be allowed to infiltrate naturally back into the underlying soils. This volume of water no longer contributes to the runoff problem. With proper design and conservative selection of factors of safety, it is appropriate to anticipate the long-term infiltration rate of the SF-Rima<sup>™</sup> pavement surface will be 1.1 in./hr (80 l/sec x ha), and much higher rates will be common in the early life of the pavement. The key to making this concept work is proper hydraulic design, adequate structural design, and judicious choice of materials and site conditions.

## **OVERVIEW OF DESIGN REQUIREMENTS**

While SF-Rima<sup>™</sup> is new to the United States and Canada, it has been used successfully in Germany for over ten years. The recommendations presented here are heavily based on this German experience, testing, and literature modified to fit North American pavement design and construction practices. The recommendations are necessarily conservative in order to ensure successful introduction of this product to North America, and more extensive technical background and detail are maintained by SF Concrete Technology, Inc. of Mississauga, Canada for those requiring more detailed data. We shall briefly examine the fundamental issues that must be addressed in evaluating candidate sites for permeable pavements made with SF-Rima<sup>™</sup> paving stones and then will examine the more detailed requirements involved in the appropriate Hydraulic Design and Structural Design of the pavement.

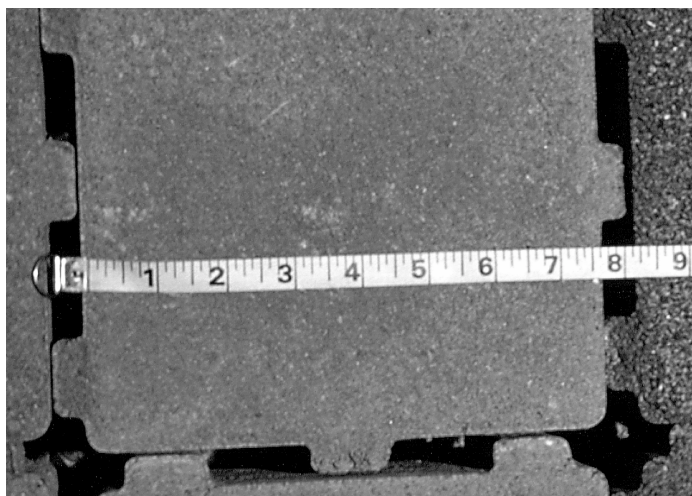


Figure 1. Unfilled Joints in SF-Rima<sup>™</sup> Paving Stone Showing Spacers.



Figure 2. SF-Rima<sup>™</sup> in Storage Yard to Provide Permeable Pavement

## Site Selection

Not every site will be appropriate for a permeable pavement. First, one must consider if there are adjacent structures or facilities such as basements that would be adversely affected by infiltrating water. Ideally, the subgrade should have a permeability exceeding  $5.4 \times 10^{-3}$  cm/sec and clayey soils should be avoided. This will be discussed further later in *Hydraulic Design Considerations*. In addition, the ground-water table should be at least 3 ft below the pavement surface, but it is best if there is at least 6 ft separation. This allows adequate filtration and trapping of contaminants and ensures proper drainage of the pavement structure. Heavily polluted sites such as maintenance areas, refueling areas, or leach pads are poor candidates for any permeable pavement as they run considerable risk of contaminating underlying ground water. Deicing salts applied to pavements have already been identified as a serious potential pollutant from conventional pavements. Consequently, if soluble deicing salts will be used on the pavement, a permeable pavement would only exacerbate the existing pollution problem. If the proposed pavement has a steep grade, a permeable pavement can be a poor choice. Water entering the uphill portion of the pavement will tend to drain out onto the surface of the lower areas rather than percolate into the subgrade. It is best if the permeable pavement has a slope between 0 and 1 percent to maximize the surface water infiltration, and it should generally not have any slopes greater than 5 percent. Steeper slopes increase runoff and minimize water infiltration.

## Surface Infiltration

The joint filling material, the bedding layer under the paving stones and the underlying base and subbase courses in the pavement must be designed to allow water drainage in order for the water to penetrate the surface. This is the key to obtaining high infiltration rates - if the joints were simply filled with the local soil, the infiltration rate would be only 10 percent of the local soil infiltration. However, by appropriate selection of the joint filling material so that its permeability is much higher and design for appropriate permeability in the underlying materials, the inflow through the joints will be much higher than the native surrounding soils. For example, a natural lean clay (CL by the unified soil classification system) soil might have a permeability on the order of  $10^{-7}$  cm/sec and a silty sand (SM) might have a permeability on the order of  $10^{-5}$  cm/sec. Proper selection of clean small gravel for filling joints will provide permeability in excess of  $10^{-3}$  cm/sec, 100 times greater than our sandy soil and 10,000 times greater than the clay soil. In this manner, a relatively small total open area in the joints is capable of providing a potentially large infiltration into the pavement structure.

These initially high permeability values will not be maintained throughout the life of the pavement. As fine material, detritus, rubber, vegetative matter, etc. accumulate in the joints, permeability will drop drastically. Unfortunately, there is no way to ascertain at the design stage what level of clogging will occur during the life of the pavement. Such clogging is a natural phenomena and is observed in well filters, geotextile filter fabrics, etc. Attempts at maintaining permeable pavements through sweeping and cleaning have given mixed results (Ferguson 1994). Consequently, the potential for long-term reduction in permeability is probably best handled by careful detailing and use of a generous factor of safety in designing for long-term infiltration.

The pavement should be designed to minimize surface flows onto the pavement that may be carrying suspended sediment. If it is necessary to divert flows from other areas onto the permeable pavement, a stilling basin, silt fence, filter, or similar structure would be prudent to remove sediment before it flows onto the permeable pavement.

While initial infiltration of SF-Rima<sup>™</sup> with small gravel as joint filling may exceed 21.25 in./hr in laboratory tests (Drewes 1989), SF Concrete Technology Inc. recommends that the long-term design infiltration rate for SF-Rima<sup>™</sup> is best taken as 1.1 in./hr to allow for differences between laboratory and field conditions, the vagaries of construction in the real world, and the inevitable clogging with fines that will occur during the extended life of the pavement. This value corresponds to results for field infiltration tests on conventional concrete paving blocks with much narrower joints than SF-Rima<sup>™</sup> and with sand-filled joints rather than gravel-filled joints recommended for SF-Rima<sup>™</sup>. As such, it represents a conservative estimate of infiltration capacity very late in the pavement life (say 25 or 30 years) when very substantial clogging has occurred.

Table 1 provides the results of measurements of field infiltration rates for SF-Rima<sup>™</sup> for various conditions and joint filling material. Several important aspects of permeable pavement behavior are illustrated in these results. The selection of the joint filling material is critical. Small crushed gravel (“chippings”) outperforms sand as a filler by a substantial margin, and sand is a poor choice if long-term infiltration is needed. Permeability of the base course under the SF-Rima<sup>™</sup> paving stone will have a major impact on the performance of the system. Also, infiltration decreases with time.

The suggestion of a long-term design infiltration rate of 1.1 in./hr appears to be reasonable and conservative in light of current knowledge and test results. It coincides with the measured infiltration of 20 year old block pavements which should be much less permeable than SF-Rima<sup>™</sup> pavements with gravel-filled joints. This design value provides a factor of safety of 20 to laboratory measured infiltration rates, a factor of safety of approximately 8 to infiltration rates measured on new SF-Rima<sup>™</sup> paving stones, and a factor of safety of approximately 3 to infiltration rates measured on 4-year old SF-Rima<sup>™</sup> paving stones. As new data become available on older SF-Rima<sup>™</sup> installations it may become possible to increase this suggested design infiltration rate.

### System Design

The SF-Rima<sup>™</sup> paving stone surface, the joint filler, the bedding layer upon which the SF-Rima<sup>™</sup> paving stone is seated, and the underlying base and subbase courses must be designed as a functional unit (Figure 3). Water must penetrate the surface rapidly, flow unimpeded to the bottom of the pavement structure where it can be allowed to percolate into the subgrade over time. The layers must be designed so that the flowing water does not dislodge and pipe finer particles into underlying layers, and the pavement must be designed to withstand the structural loads applied by vehicular traffic. An example of the design process is shown in Appendix A.

| Table 1. Measured Field Infiltration Rates of SF-Rima™ (data from Borgwardt 1995) |              |       |                                          |                   |       |
|-----------------------------------------------------------------------------------|--------------|-------|------------------------------------------|-------------------|-------|
| Inst. No.                                                                         | Application  | Age   | Joint Filling                            | Infiltration Rate |       |
|                                                                                   |              |       |                                          | l/sec x ha        | in/hr |
| 1                                                                                 | Storage Area | New   | Chippings, 2/5 mm                        | 640               | 8.7   |
| 2                                                                                 | Parking Lot  | 2 yrs | Chippings, 2/5 mm                        | 140               | 2.0   |
| 3                                                                                 | Parking Lot  | 4 yrs | Chippings, 2/5 mm                        | 230               | 3.2   |
| 4                                                                                 | Parking Lot  | 4 yrs | Chippings, 2/5 mm with vegetation growth | 210               | 2.9   |
| 5                                                                                 | Parking Lot  | New   | Sand                                     | 120               | 1.7   |
| 6                                                                                 | Parking Lot  | 5 yrs | Sand                                     | 20                | 0.3   |

Notes: All testing done under the direction of Dr. Sönke Borgwardt, a scientific advisor for ecological planning in Hannover, Germany. Testing used a percolating infiltrometer that simulates rainfall onto a sealed 0.2 m<sup>2</sup> area on the pavement surface. Infiltration curves are developed that show an exponential drop in infiltration rate with time that approaches an asymptotic value when the joint materials are saturated. Infiltration rates reported in this table are at 15 minutes which in all tested materials was on the asymptotic portion of the curve as the joint materials were at or near saturation. This indicates the steady, long-term infiltration rate under prolonged rainfall. Chippings are crushed aggregate with all particles between 2 and 5. The sand was appreciably finer with particles between 0 and 2 mm. Test No. 4 was at the same location as No. 3 but was in an unused area where vegetation had begun growing in the joints. Test No. 4 had an asphalt base which had some believe had become plugged with fines and had an unexpectedly low permeability.

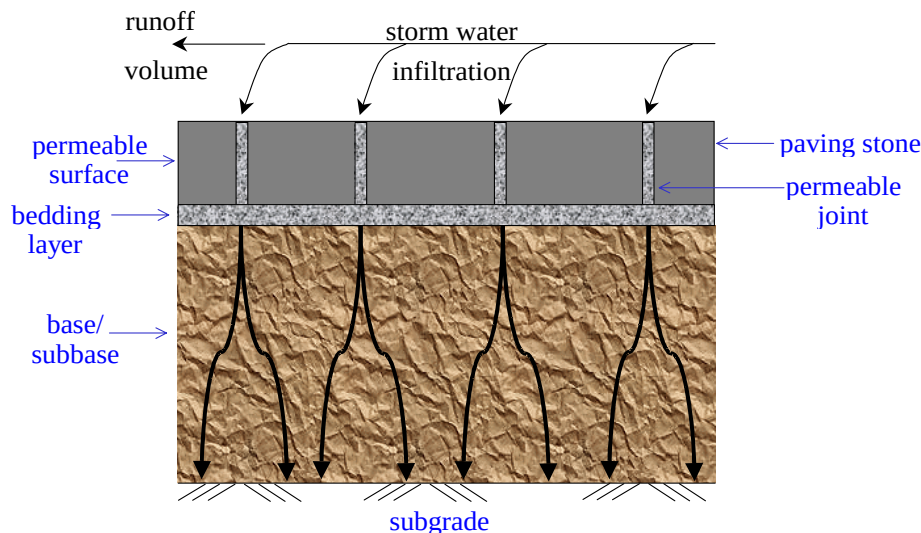


Figure 3. Cross Section of Permeable Pavement with SF-Rima™ Surface

### Design Storm and Regulatory Compliance

The specific storm for which facilities must be designed is generally set by regulatory requirements and typically is expressed as a storm of a specific period and recurrence level. For example, the one-hour, 10-year storm would provide the rainfall expected of a storm lasting one hour and occurring on the average once every ten years. Maps are prepared showing the rainfall intensities or total rainfall expected for different lengths of storm and different recurrence levels in standard government publications (e.g., Department of Commerce 1961, 1964) or handbooks on storm-water design (e.g., Ferguson 1998).

The SF-Rima<sup>™</sup> paving stone surface will probably infiltrate the bulk of most storms during its early life, but design should provide additional storm-water control capacity for runoff that develops from the largest storms and which will develop later in the pavement life as permeability drops toward the recommended 1.1 in./hr design rate. SF-Rima<sup>™</sup> is capable of significantly reducing runoff from paved surfaces, but a secondary control system will generally be needed (depending on location and specific design storm) to handle the reduced runoff from the pavement, and the SF-Rima<sup>™</sup> capacity and the secondary system need to be incorporated with other storm-water control facilities for the site. These additional systems should make maximum use of the new concepts encouraging environmentally sensitive storm-water control and infiltration concepts.

## HYDRAULIC DESIGN CONSIDERATIONS

### Permeability

The ability of water to flow through a soil or gravel material is usually assessed by the material's coefficient of permeability which is defined to be the rate of discharge of water at 20°C under conditions of laminar flow through a unit cross-section of soil under a unit hydraulic gradient and is expressed in units of length per time (e.g., cm/sec or in./hr). The value of the coefficient of permeability of soils and gravels is a function primarily of its particle size with the percentage of fine particles (particles passing the No. 200 sieve) having a particularly important impact, the distribution of particle sizes or grading of the soil, plasticity characteristics of the soil, and the soil's density. Probably no engineering material property shows as wide a variety of values as does soil permeability which may range from  $10^{-10}$  to  $10^2$  cm/sec (12 orders of magnitude).

Determining the coefficient of permeability of a material is difficult. Permeability can be measured in the laboratory using constant head or falling head tests, but laboratory samples seldom are representative of field conditions. There are also empirical equations such as Hazen's equation below that estimate permeability based on grain size characteristics:

$$k = C_1 (D_{10})^2$$

where  $k_1$  is coefficient of permeability in cm/sec,  $C_1$  is a constant equal to a value between 1.0 and 1.5, and  $D_{10}$  is the effective grain or particle size in mm at which 10 percent of the soil particles are finer and which is determined from the soil gradation curve. This equation is only very approximate; it is based on tests with sand; and it neglects the very large effect of density and void ratio on the coefficient of permeability. There are also a variety of different field permeability tests which require skill and experience to interpret accurately. Because permeability is such a difficult parameter to determine accurately, many small projects are designed with a hefty factor of safety and approximate estimates of permeability based on approximate correlations to soil types. Table 2 provides some general estimates of permeability for different soil types, but as with all such generic tables, the data should be used with caution. More comprehensive information on permeability is available from standard references on soil mechanics or on pavement drainage (e.g., Federal Highway Administration 1980 or Cedergran 1974).

### **Joint and Bedding Layer Materials**

Selecting a proper material for the joint filling material and the bedding layer under the SF-Rima<sup>TM</sup> paving stone is crucial to the success of the infiltration system. German practice calls for this material to have an average permeability of  $2 \times 10^{-3}$  cm/sec or better. In practice, this has been met by crushed fine gravel with particles between 2 and 5 mm (roughly No. 10 to 1/4 in. sieve) or alternatively a somewhat finer gradation between 1 and 3 mm (roughly No. 20 sieve to No. 6 sieve). Aggregate size No. 9 under ASTM D 448 (4.75 mm to 1.18 mm) roughly encompasses both of these standard German gradations. This crushed aggregate offers high interlock and stability, it has sufficient void space to allow rapid infiltration; it is sufficiently fine to allow filling of the joints between stones; and it also allows proper seating of the stone in the bedding layer. The bedding layer is a construction necessity to allow proper leveling of the stones. This layer should be kept to not more than 1 in. in thickness, and excessive thickness of the bedding layer can be detrimental to the structural performance of the pavement. As seen in Table 1 and 2, sands simply will not provide the desired permeability, and they are more prone to clogging than are the coarser gravels. Crusher screenings are unsuitable for these applications because of excess fines.

### **Base and Subbase Course Materials**

The base and subbase courses of the pavement are a major element of the water penetration and storage system of the pavement. They should drain all water that infiltrates into the bedding layer, and consequently, the base should have a permeability greater than the bedding layer. Permeability greater than  $10^{-2}$  cm/sec is recommended for the base course material.

Conventional dense-graded aggregates such as those in ASTM D 1241 or that are commonly used for pavement construction are totally unsuitable for use in a permeable pavement. As seen in Table 2, their permeabilities will normally be far too low because of the content of minus No. 200 material and the high densities to which they are compacted.

| Table 2. General Estimates for Permeability Values for Paving Materials                |                                                                                                                                                                                  |                        |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| Material                                                                               | Qualifying Notes                                                                                                                                                                 | Permeability (cm/sec)  |
| Conventional Pavement Surfacing Materials                                              |                                                                                                                                                                                  |                        |
| Portland Cement Concrete                                                               | Leakage through poorly sealed joints and cracks will be much higher                                                                                                              | $< 10^{-8}$            |
| Asphaltic Concrete                                                                     | Highly dependent upon density. Increased leakage at construction joints between lanes, particularly if poorly done.                                                              | $10^{-3}$ to $10^{-8}$ |
| Typical Base and Subbase Courses, Fill Materials, and predominately Granular Subgrades |                                                                                                                                                                                  |                        |
| Dense-Graded Base Course                                                               | Well-graded, low plasticity, about 5 to 15 percent passing the No. 200 sieve, and very well compacted. Typically, GW-GM, GP-GM, or GM by the unified soil classification system. | $10^{-2}$ to $10^{-6}$ |
| Dense-Graded Base with Few or No Fines                                                 | Similar to the above but with 0 to 5 percent passing the No. 200 sieve and classifying as GW or GP by the unified soil classification system.                                    | $10^{-1}$ to $10^{-2}$ |
| Clayey Gravels                                                                         | Have significant plastic fines and classify as GW-GC, GP-GC, or GC by the unified soil classification system.                                                                    | $10^{-3}$ to $10^{-7}$ |
| Open-Graded Gravels                                                                    | Uniformly-graded with few or no small sand sizes. Designed to provide good drainage and classifying as GP. Typical example is No. 57 stone in ASTM D 448                         | $10^{-1}$ to $10^{-2}$ |
| Well-Graded Sand with Few or No Fines                                                  | Often sold as a concrete sand and classifying as SW or SP by the unified soil classification system.                                                                             | $10^{-2}$ to $10^{-4}$ |
| Silty Sands                                                                            | Typically classifying as SP-SM, SW-SM, or SM.                                                                                                                                    | $10^{-3}$ to $10^{-7}$ |
| Clayey Sands                                                                           | Typically classifying as SP-SC, SW-SC, or SC.                                                                                                                                    | $10^{-6}$ to $10^{-8}$ |
| Poorly-Graded Sands                                                                    | Typically classifying as SP. Examples would be beach or filter sands.                                                                                                            | $10^{-1}$ to $10^{-3}$ |
| Typical Fine-Grained Subgrade Materials                                                |                                                                                                                                                                                  |                        |
| Silts                                                                                  | Typically classifying as ML or MH.                                                                                                                                               | $10^{-4}$ to $10^{-9}$ |
| Lean Clays                                                                             | Typically classifying as CL or CL-ML.                                                                                                                                            | $< 10^{-6}$            |
| Highly Plastic Clays                                                                   | Typically classifying as CH.                                                                                                                                                     | $< 10^{-8}$            |



Generally, the base course will have to be a special material selected for its high drainage capacity. This will normally be an open-graded material such as a size No. 357 (2 in. to No. 4), No. 467 (1 ½ in. to No. 4), No. 57 (1 in. to No. 4), or No. 67 (¾ in. to No. 4) stone from ASTM D 448. This material should be crushed so that it has a high degree of stability as well as high drainage capacity. These open-graded materials are sometimes difficult to work with during construction as they are unstable under foot and vehicle traffic unless they are confined in the pavement structure. For that reason they are sometimes "choked" with a finer gravel which provides a more stable operating surface. The choking material is spread over the surface in a thin layer (~ ½ in.) and worked into the surface voids of the open-graded material by wetting and rolling with a vibratory roller (analogous to the old-fashioned Macadam pavement construction). The finer gravel helps fill in the surface voids, but because it contains no fines or fine sand particles, it still maintains a high permeability in the system. Alternatively, a gradation that has a wider spectrum of particle sizes but does not include fine sands and minus No. 200 material will provide superior stability, especially during construction activities and may still provide adequate permeability. Table 3 shows a very open-graded gradation, a choke stone gradation that may be used with it to improve surface stability of the open-graded stone, and a less permeable but still rapid-draining graded material that the U.S. Army Corps of Engineers currently recommends for use as possible drainage media in pavements. Small additions of asphalt cement and portland cement have been used to stabilize open-graded drainage layers, but extreme care must be used to ensure that only a minimal amount of binder is used to coat and secure the particles but still leave the void structure unfilled.

Conventional compaction tests are almost impossible to run on these open-graded granular materials and accurate measurement of the in-situ density is almost impossible in the field. Consequently, it is more common to specify a method of compaction rather than try to specify a certain percentage of a laboratory density as is customarily done. A minimum of six coverages with a 10-ton (static weight) vibratory roller has been used as a specification requirement for compaction of some drainage layers within pavements.

Depending on specific structural requirements, design storm, and subgrade permeability, it may be possible to use a less expensive and less open-graded material for a subbase below the base course. However, design calculations should establish the permeability needed to accomplish the project objectives.

| Table 3. Suggested Requirements for Granular Drainage Materials in Pavements<br>(U.S. Army Corps of Engineers 1992)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                               |                      |                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------|-------------------------------------|
| Property                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Open-Graded Drainage Material |                      | Graded, Rapid-<br>Draining Material |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Open-Graded Material          | Optional Choke Stone |                                     |
| Gradation, Sieve Size                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                               |                      |                                     |
| 1½ in.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 100                           | 100                  | 100                                 |
| 1 in.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 95 - 100                      | 100                  | 70 - 100                            |
| ¾ in.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | --                            | 100                  | 55 - 100                            |
| ½ in.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 25 - 80                       | 100                  | 40 - 80                             |
| ⅜ in.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | --                            | 80 - 100             | 30 - 65                             |
| No. 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0 - 10                        | 10 - 100             | 10 - 50                             |
| No. 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0 - 5                         | 5 - 40               | 0 - 25                              |
| No. 16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | --                            | 0 -10                | 0 - 5                               |
| ASTM Size<br>Designation (D 448)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ~ No. 57                      | No. 8                | None                                |
| Design CBR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 80                            | 80                   | --                                  |
| Effective Porosity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.32                          | --                   | 0.25                                |
| Approximate<br>Permeability cm/sec                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | > 1                           | --                   | 10 <sup>-1</sup> - 1                |
| Quality Requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                               |                      |                                     |
| Crushed Particles, %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 90                            | 90                   | 90                                  |
| C <sub>u</sub>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | --                            | --                   | > 3.5                               |
| LA Abrasion, %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | < 40                          | --                   | < 40                                |
| Notes: C <sub>u</sub> = D <sub>60</sub> /D <sub>10</sub> . The Corps of Engineers open-graded gradation deviates from ASTM<br>Size No. 57 stone at the ½ in. sieve where it allows 80 percent passing rather than 60 percent.<br>Choke stone is spread and vibrated into surface of open-graded material to improve surface<br>stability for construction activities if desired. Only sufficient material to fill and stabilize<br>surface voids is used. If choke stone is used it must also meet the following filter criteria: D <sub>15</sub><br>Open- Grade/D <sub>50</sub> Choke Stone < 5 and D <sub>50</sub> Open-Grade/D <sub>50</sub> Choke Stone > 2. |                               |                      |                                     |

The base and subbase also serve as storage basins to hold the water while it percolates into the subgrade. The quantity of water that may be held can be determined by

$$V = 1 - \frac{\gamma_d}{G_s \gamma_w}$$

where V is the volume of water in one cubic foot of soil or aggregate,  $\gamma_d$  is the dry unit weight of the soil or aggregate,  $G_s$  = specific gravity of the soil or aggregate, and  $\gamma_w$  is the unit weight of water, usually taken as 62.4 lb/ft<sup>3</sup>. The volume of water storage available in the base and subbase must exceed that expected to infiltrate during the design storm.

### **Subgrade**

If a subgrade has an inadequate permeability, it will tend to have a high percentage of minus No. 200 sieve fines and may also be plastic. Such materials are likely to lose strength in the presence of moisture and may pose structural and behavior problems (e.g., some clays are highly expansive when their moisture content increases). In addition, as the subgrade permeability drops, it will take increasingly long times for the water within the pavement structure to percolate into the soil. Consequently, the subgrade permeability under pavements to be subjected to vehicular traffic should be equal to 10<sup>-3</sup> cm/sec in most cases to ensure a successful application of permeable pavement concepts. Ideally, the subgrade should have less than 5 percent passing the No. 200 sieve, but subgrades with up to 25 percent passing may be adequate depending on their specific characteristics and the site conditions. It may be feasible to design adequate systems for other soils, but this will require some significant engineering effort to achieve success. Such applications must be examined carefully on a case-by-case basis. Obviously pedestrian walkways and plazas not subject to traffic loads can be designed for more impermeable subgrades.

### **Filter Requirements**

As water flows through granular materials, fine particles can be dislodged from one material and deposited in the pores of the next material. This will result in clogging and loss of permeability in the zones where these fine particles accumulate. To prevent this, materials adjacent to one another must meet filter criteria which essentially ensures that the relative particle sizes for two adjacent materials are compatible, and this internal erosion of particles will not occur. Meeting these requirements in a permeable pavement is crucial and essentially requires checking filter criteria for jointing and bedding materials (if two different materials are used, the bedding material and the base course, the base and the subbase course, and the subbase and subgrade interfaces.) Table 4 shows filter criteria that are commonly used in the U.S. and Canada. If the criteria cannot be met, an alternative material must be substituted for one of the materials, an intermediate material at least 4 in. thick that can meet the filter criteria must be placed between the layers, or a geosynthetic filter cloth can be used to separate the layers. Meeting filter requirements may prove to be the difficult part, but it is crucial to the long-term success of the project.

| Table 4. Recommended Filter Criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Source                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Criteria                                                                                                                                                                                                                                                                                                                                 | Limitations                                                                                                                                                                                      |
| <b>Soils and Aggregates</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                  |
| Federal Highway Administration (1980) and Corps of Engineers (1979)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | $D_{15 \text{ layer 1}}/D_{15 \text{ layer 2}} \geq 5$<br>$D_{15 \text{ layer 1}}/D_{85 \text{ layer 2}} \leq 5$<br>$D_{50 \text{ layer 1}}/D_{50 \text{ layer 2}} \leq 25$                                                                                                                                                              | no gap graded material, $C_u \leq 20$ (suggested), and $D_5$ of layer 1 $\geq 0.074$ (suggested)                                                                                                 |
| U.S. Bureau of Reclamation (1974)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | $5 \leq D_{50 \text{ layer 1}}/D_{50 \text{ layer 2}} \leq 10$<br>$12 \leq D_{15 \text{ layer 1}}/D_{15 \text{ layer 2}} \leq 40$<br>$12 \leq D_{50 \text{ layer 1}}/D_{50 \text{ layer 2}} \leq 58$<br>$6 \leq D_{15 \text{ layer 1}}/D_{15 \text{ layer 2}} \leq 18$<br>$9 \leq D_{50 \text{ layer 1}}/D_{50 \text{ layer 2}} \leq 30$ | for uniformly graded filters<br>for graded filters with rounded particles<br>for graded filters with crushed particles                                                                           |
| <b>Geosynthetics</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                  |
| AASHTO (1991)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | $O_{95} < 0.59 \text{ mm}$<br>$(AOS_{\text{fabric}} \geq \text{No. 30 sieve})$<br>$O_{95} < 0.30 \text{ mm}$<br>$(AOS_{\text{fabric}} \geq \text{No. 50 sieve})$                                                                                                                                                                         | for soils $\leq 50\%$ passing No. 200 sieve<br>for soils $> 50\%$ passing No. 200 sieve                                                                                                          |
| Department of the Army (1995)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | $AOS < 0.6 \text{ mm} (> \text{No. 30})$<br>$POA \geq 10\% \text{ or } k_G \geq 5 k_S$<br>$AOS < 0.6 \text{ mm} (> \text{No. 30})$<br>$POA \geq 4\% \text{ or } k_G \geq 5 k_S$<br>$AOS < 0.297 \text{ mm}$<br>$POA \geq 4\% \text{ or } k_G \geq 5 k_S$<br>$AOS < 0.297 \text{ mm}$<br>$k_G \geq 5 k_S$                                 | for soils with $< 5\%$ passing No. 200 sieve<br>for soils with 5 to 50% passing No. 200 sieve<br>for soils with 50 to 85% passing No. 200 sieve<br>for soils with $> 85\%$ passing No. 200 sieve |
| Notes: (1) $C_u = D_{60}/D_{10}$<br>(2) $D_x$ is particle size at which x percent of the particles are finer. Determined from gradation curve. $D_{10}$ is the size particle of a soil or aggregate gradation for which 10 percent of the particles are smaller and 90 percent are coarser.<br>(3) Water flow is from layer 2 to layer 1. See example problem in Appendix A for detailed discussion and example of application.<br>(4) $O_x$ is geotextile opening size corresponding to x particle size based on dry glass bead sieving. Hence $O_{95}$ is the geotextile opening size for which 95 percent of the holes are smaller. AOS is apparent opening size is essentially the same but normally is defined as a sieve number rather than a size (ASTM D 4751). POA is percent open area (for woven fabrics only). Permeability of the soil and geotextile (nonwoven only) are designated $k_S$ and $k_G$ respectively. |                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                  |

## Construction

Care is needed during construction to prevent contamination and plugging of the voids in the drainage and filter materials. This can arise from a variety of sources: dirt and mud tracked onto surfaces by construction surfaces, sedimentation from storm-water runoff from adjacent areas where adequate drainage and protection has not been provided, wind-blown particles from adjacent areas that are stripped of cover and left unprotected during construction, etc. It is best if construction traffic can be kept off of the drainage and filter materials, but on large projects this may not be practical. In such cases, it may be prudent to establish a on-site station to rinse off equipment tires and undercarriages before they are allowed to travel on these materials. If a drainage or filter material is contaminated by construction activities it will have to be removed and replaced. It is prudent to always inspect the surface of each layer just prior to placement of the next layer to ensure inadvertent contamination has not occurred.

## Use with Existing Runoff Design Methods

The two most common methods of estimating rainfall runoff and flows are the old "Rational" method and the newer Soil Conservation Service or SCS method. In the Rational method peak flows are calculated using a runoff coefficient or cover factor that varies from 0.1 for porous undeveloped lands to 0.95 for impervious paved areas. The Soil Conservation Service uses a "curve number" or CN that varies with the soil type and land use. The CN might vary from around 30 for a meadow with permeable soils to 98 for impervious roofs and pavements. Both methods of determining rainfall flows are used in the U.S. today. The SCS method is well documented (U.S. Soil Conservation Service 1986) and is coming into increasingly wider acceptance. The rational method is simple to use, but is best suited to small drainage basins of 200 acres or less.

**SCS Method.** The SCS method is always based on the 24 hour rainfall, and the designer or regulatory agency selects the storm recurrence period (e.g., two-year, a 24-hour storm, a ten-year 24-hour storm, etc.). This design storm is used to establish the design 24 -hour precipitation for which facilities will be designed and upon which runoff calculations will be based. The following discussion provides only a brief introduction to the SCS method, and the reader is referred to the SCS documentation (U.S. Soil Conservation Service 1986) or other appropriate professional references on this topic for complete explanation of the system and its limitations and assumptions. The basic calculation in the Soil Conservation Service method is the determination of the depth of runoff, and this is accomplished using the following equation:

$$D = \frac{(P - I)^2}{(P - I + S)}$$

where D = depth of runoff (in.)

P = depth of 24 hour rainfall

I = initial abstraction or loss of rainfall before runoff begins, often approximately 0.2S

S =  $(1000/CN) - 10$

CN = curve number which is a function of the drainage area's soil and land use

Since SF-Rima<sup>™</sup> paving stone is a new product and concept, there is no established method of incorporating it into the SCS system. However, it is possible to estimate the approximate CN value that would be appropriate for a properly designed SF-Rima<sup>™</sup> surface. If one uses the long-term design infiltration rate of 1.1 in. per hour discussed earlier as the infiltration before runoff begins and if the initial abstraction of 0.2S is accepted, the equivalent curve number or CN for SF-Rima<sup>™</sup> paving stone can be estimated to be

$$S = \frac{I_a}{0.2} = \frac{1.1}{0.2} = 5.5 = \frac{1,000}{CN} - 10$$

and

$$CN = \frac{1,000}{15.5} = 64.5$$

With these assumptions a paved area with SF-Rima<sup>™</sup> stone at a period late in its life would have an approximate curve number, CN, of 65. Table 5 provides a sample of different curve numbers for different conditions and reveals the SF-Rima<sup>™</sup> stone would have infiltration rates superior to a gravel-road and intermediate between a grass covered lawn with a B soil group and a C soil group. To use this estimated CN value, the designer should also check that the water storage capacity within the pavement will be adequate to store the water until it has a chance to infiltrate into the subgrade. Since the initial abstraction,  $I_a$ , of SF-Rima<sup>™</sup> is based on infiltration and storage into granular materials, there is no difference in CN number for different subgrade soils in Table 5. However, as noted earlier, SF-Rima<sup>™</sup> stone is best suited for well-drained soils and its use on fine-grained or clayey soils would require intensive engineering and study to be sure that it would function adequately.

| Table 5. Sample SCS Curve Numbers (CN) for Different Conditions                                                                                                                                                                                                                                                                                                                                                                              |                                                 |                         |    |    |    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|-------------------------|----|----|----|
| Surface Cover                                                                                                                                                                                                                                                                                                                                                                                                                                | Use and Conditions                              | Hydrological Soil Group |    |    |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                 | A                       | B  | C  | D  |
| Woods                                                                                                                                                                                                                                                                                                                                                                                                                                        | no grazing, litter and brush cover soil         | 30                      | 55 | 70 | 77 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                              | heavy grazing or burning destroys litter        | 45                      | 66 | 77 | 83 |
| Meadow                                                                                                                                                                                                                                                                                                                                                                                                                                       | grass mowed for hay, not grazed                 | 30                      | 58 | 71 | 78 |
| Pasture                                                                                                                                                                                                                                                                                                                                                                                                                                      | > 75% ground cover, light grazing               | 39                      | 61 | 74 | 80 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                              | 50 - 75% ground cover                           | 49                      | 69 | 79 | 84 |
| Row Crops                                                                                                                                                                                                                                                                                                                                                                                                                                    | straight rows, high density, ≥20% residue cover | 67                      | 78 | 85 | 89 |
| Lawn, Turf                                                                                                                                                                                                                                                                                                                                                                                                                                   | >75% cover                                      | 39                      | 61 | 74 | 80 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                              | 50 - 75% cover                                  | 49                      | 69 | 79 | 84 |
| Newly Graded Soil                                                                                                                                                                                                                                                                                                                                                                                                                            | No vegetation or pavement                       | 77                      | 82 | 87 | 89 |
| Pavements                                                                                                                                                                                                                                                                                                                                                                                                                                    | gravel surface to include right-of way          | 76                      | 85 | 87 | 89 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                              | paved roads and adjacent swales                 | 83                      | 89 | 92 | 93 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                              | impervious pavements and roofs                  | 98                      | 98 | 98 | 98 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                              | SF-Rima Stone (estimated)                       | 65                      | 65 | 65 | 65 |
| Notes: Table is illustrative only to show relative SF-Rima™ CN value. Consult Soil Conservation Service (1986) for comprehensive tables and definitions. Soil group A soils are well-drained sandy and gravelly soils, B soils are moderately well-drained with mixed fine and coarse soil particle texture, C soils are moderately fine to fine textured with low infiltration rates, and D soils are clay soils with high runoff potential |                                                 |                         |    |    |    |

**Rational Method.** The rational method is over 100 years old and is described in almost any handbook on runoff calculations or hydraulic design. Over its long history some different variations have developed. The fundamental basis of the rational method is the following equation to calculate peak flow, Q, which was originally intended to be used to size culverts:

$$Q = CIA$$

where Q = peak flow in cubic feet per second  
 I = design rainfall intensity in inches per hour  
 A = drainage area in acres  
 C = runoff coefficient

The runoff coefficient reflects the drainage areas cover, soil, slopes, etc. (e.g., C for forest = 0.1 to 0.3, C for turf or meadow = 0.1 to 0.4, C for pavement = 0.8 to 1.0, etc.). There are a variety of different compilations for suggested C values which provide different values for similar site conditions. An appropriate C value for SF-Rima<sup>™</sup> stone can be estimated as

$$C = \frac{I-1.1}{I}$$

Where I is the design rainfall intensity in in./hr and 1.1 in./hr is the long-term design infiltration rate. This assumes 100 percent runoff of all water that is not infiltrated through the SF-Rima joints, and the designer needs to confirm the internal water storage capacity within the pavement is adequate to handle the total volume of water infiltrated by the design storm. Once the internal storage capacity within the joints, bedding layer, base, and subbase is full, runoff would be 100 percent.

## STRUCTURAL DESIGN CONSIDERATIONS

The pavement must have the structural design capacity to withstand the anticipated loads. There are two fundamental aspects to providing structural capacity. First, the materials used within the pavement system must be structurally sound and able to withstand the loads. Second, the thickness of the pavement must be sufficient to distribute the surface loads over a large enough area to avoid shear deformations in the subgrade.

### Material Requirements

Material requirements identified for hydraulic design considerations were very stringent in order to achieve the desired long-term infiltration capacities. Materials used in the pavement (joint filler, bedding layer, base, subbase, and filters as needed) are essentially granular materials and in most cases are crushed materials. This should provide a high degree of strength. All of these materials must be nonplastic (ASTM D 4318) which is more stringent than normally used in pavement construction. However, because of the large volumes of water passing through the pavement structure, it will be necessary to avoid plastic materials which are vulnerable to losing strength when wet. The permeability requirements generally require that all of the materials have little to no fines which also avoids development of pore pressures under load and loss of strength.

Pavement materials are compacted for two reasons: (1) to avoid densification under traffic and (2) to achieve strength and other engineering properties in the field at least equal to those assumed in design. From a water infiltration point of view, we wish to limit compaction as increased compaction translates into reduced permeability. However, compaction levels to be achieved in the field are based on engineering requirements and generally should not be waived without careful evaluation of the implications. Rollings and Rollings (1996) provides an



extensive discussion of compaction and its effects on soils and aggregates. In general, it will be necessary for all portions of trafficked SF-Rima<sup>TM</sup> pavements to be compacted to levels equivalent to those used in conventional pavements.

The very rapid draining nature and very low fine content of materials used in SF-Rima<sup>TM</sup> pavements should avoid problems with frost and frost heave within the pavement structure. In the unusual combination where water from rain or thawing snow is caught within the pavement system by sustained freezing temperatures the existing water in the system will expand by 9 percent. However, the lack of fines within the base, subbase, bedding layer, and joint filling material prevents highly destructive ice lenses formed by the migration of unfrozen water to the freezing zone from occurring within the SF-Rima<sup>TM</sup> pavement system. This ice lens formation is the phenomenon that causes the frost heaves in conventional pavements in severe climates that are so destructive to pavements and aggravating to motorists. The open void structure of the materials used in the SF-Rima<sup>TM</sup> pavement allows room to accommodate some volume expansion from freezing. In the unusual situation where the whole system is saturated and then is rapidly frozen some heave is possible, but the modular nature of the SF-Rima<sup>TM</sup> pavement surface accommodates such heave far better than conventional pavement surfaces. This product has been used successfully in Germany for over 10 years now and has demonstrated its ability to perform satisfactorily under wet and cold winter conditions. In frost regions, the effects of freezing on the subgrade soils will have to be evaluated as for any other pavement.

### **Thickness Design Methods**

Modular concrete systems such as SF-Rima<sup>TM</sup> provide a high-quality pavement surface. However, these are flexible pavements as are asphalt concrete surfaced pavements. It is the overall thickness and quality of the base and subbase and strength of the subgrade that provide the structural capacity of the pavement. SF-Rima<sup>TM</sup> is a wearing surface, and like all flexible pavement surfaces, its contribution to the pavement structural capacity is modest. SF-Rima<sup>TM</sup> will not make up for inadequate base, subbase, or thickness in the pavement.

Considerable work has been done examining behavior of conventional concrete paving blocks with relatively narrow sand filled joints. These studies are extensively reported and discussed in the proceedings of the international conferences on concrete paving blocks that are held every four years. SF Concrete Technology or the authors of this report can assist the reader desiring more detail on this topic in locating these references. Rollings et al (1992) provides a summary and contrast of different structural design concepts for these conventional concrete paving block pavements. These past studies have confirmed that these pavements behave as flexible pavements and provided basic approaches for structural design. Structurally, SF-Rima<sup>TM</sup> behaves as does a conventional block pavement. It has wider joints which will tend to reduce its stiffness somewhat, but it also has a high-quality crushed aggregate as a joint filler rather than sand which should tend to increase its resistance to deformation. Because extensive structural testing has not been carried out with SF-Rima<sup>TM</sup>, it is probably best to use a conservative approach to interpreting design guidance for conventional blocks. There are three fundamental approaches to structural thickness design of block pavements that can be adapted to use with SF-Rima<sup>TM</sup>. Only a quick summary of how to adapt existing design methods can be provided here.

**Equivalent Thickness.** In this approach, a conventional asphalt concrete pavement thickness is designed using any existing design method. Then the SF-Rima<sup>TM</sup> stone is simply used as a direct one-for-one substitution of the existing design. The 80-mm thick SF-Rima<sup>TM</sup> stone and 1-in. thick bedding layer simply comprise the top 4 in. of the existing design requirements. The subgrade strength will have a major impact on the total design thickness. The base and subbase and filter courses as required are used to provide the remainder of the pavement thickness. In many cases, particularly if traffic loads are relatively light, hydraulic design considerations (water volume storage, filter requirements, etc.) may control the thickness of the pavement rather than structural load supporting requirements. This approach is easy, and it is easily adapted to situations where an agency requires a specific design approach.

**AASHTO.** The AASHTO design method or some modification of it is widely used by state departments of transportation. This design approach is based on the AASHTO road tests and uses an empirical equation to relate passes of an equivalent 18 kip axle load to the structural capacity of the pavement (represented by a structural number or SN) and the serviceability index of the pavement. The major problem with adapting SF-Rima<sup>TM</sup> to this design approach is identifying an appropriate layer coefficient ( $a_1$ ) for determining the structural number of the pavement. Rada et al (1990) estimated that an appropriate AASHTO layer coefficient ( $a_1$ ) for conventional paving blocks and bedding layer would be initially 0.26 with it increasing with traffic as the system locks up and stiffens until a value of 0.44 at 10,000 equivalent axle load repetitions. This should be adequate for SF-Rima<sup>TM</sup> also.

**Layered Elastic Design.** Several pavement design methods have been published in recent years that use the layered elastic analytical model to calculate strains in the pavement and use these calculations as a basis for design of the pavement. Each layer in the pavement has to be represented by a modulus of elasticity and Poisson's ratio to allow the calculations to be made. Obviously, SF-Rima<sup>TM</sup> is not a continuous, linearly elastic medium so an equivalent effective modulus and Poisson's ratio are needed to allow design with this technique. A variety of investigators have used different techniques to determine an effective modulus for conventional blocks, and an effective modulus in the range of 150,000 to 650,000 psi appears reasonable for conventional block pavement surfaces (Rollings et al 1992). For SF-Rima<sup>TM</sup>, with which we have less experience than conventional paving block, a lower design value in the range of 200,000 psi would appear prudent at this time. Poisson's ratio should be taken as appropriate for a granular material and should probably be 0.30 to 0.35.

## CONCLUSIONS

Our view on the world today is changing. Concepts of *sustainable development* or *green development* have moved from the esoteric world of the academic and the polarized rhetoric of the activist to the pragmatic worlds of development, engineering, and construction. SF-Rima<sup>TM</sup> permeable paving stones provide us with a tool with which we can design new approaches to control storm water. Rather than being forced to deal with the massive quantities of runoff from our paved surfaces, we can now develop methods of allowing portions of this water to enter the pavement and infiltrate into the native soils. This reduces the quantity of runoff for which we must make provisions, reduces downstream pollution and sedimentation, and allows for desirable

recharge of our natural ground-water system. With SF-Rima™ a whole new approach to dealing with storm water is available and that is fully compatible with modern concepts of sustainable development.

While SF-Rima™ is new in North America, it has a decade of successful past use in Germany. Because of this past experience and lack of any similar experience in North America, this document has relied heavily on German experiences and practices and has been purposely conservative in interpretation of available information. Not every site or subgrade is suitable for a permeable pavement, and this document has tried to identify those conditions under which the greatest success can be expected. Proper selection of materials to use with the SF-Rima™ paving stones is crucial, and this document has suggested appropriate materials for use as the joint filler, bedding layer, and in the base and subbase courses. The water flow within the pavement can wash particles from one layer to another so it is crucial that filter criteria such as that in Table 4 be met. Since this is a new product, existing runoff design methods and structural pavement design methods do not specifically address SF-Rima™ systems. Available information has been used to provide methods of adapting the two most commonly used runoff design methods and three different pavement structural design methods to accommodate SF-Rima™, and its unique characteristics. As more experience is gained with this product here in North America, practices with SF-Rima™ will also evolve further.

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APPENDIX A: EXAMPLE DESIGN PROBLEM

This example is illustrative only and is to demonstrate the steps and considerations involved in designing an SF-Rima™ pavement. Several aspects are highly simplified in this example to allow a simple presentation of the concepts. Actual designs should be done by professionals who are cognizant of the technical and regulatory issues involved in this type of engineering work.

A parking lot for a new car dealership is to be built to minimize runoff using a SF-Rima™ surface. The rational method will be used for storm-water design, and the design storm intensity for this example will be 2 in./hr (the actual design storm is selected based on local regulatory requirements or if there is none, it is a matter for professional engineering judgement based on local climate, site conditions, and criticality of the facilities that may be affected by storm-water runoff). The subgrade soil is a poorly-graded sand. A crushed fine aggregate is available for the joint filling material, and a crushed aggregate meeting the Corps of Engineers requirements for a rapid draining material in Table 3 is available for the base course material. The gradations for the subgrades and these construction materials are shown in Figure A1.

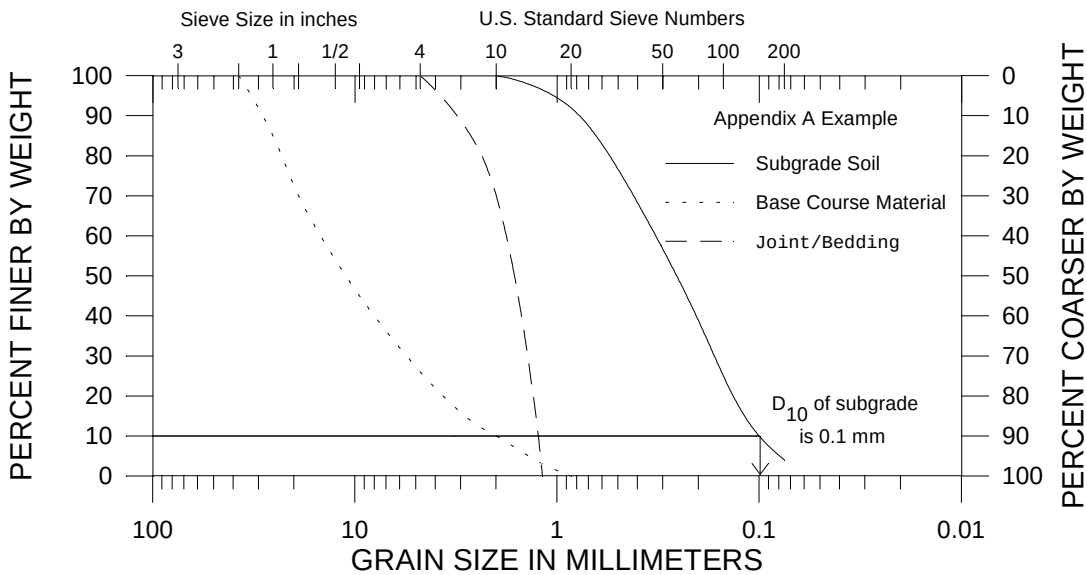


Figure A1. Material Gradations for Example Problem and Showing Calculation of D<sub>10</sub> Value for the Subgrade

### Site Suitability

The subgrade is a poorly graded sand with only 4 percent passing the No. 200 sieve which would lead one to expect a permeability of  $10^{-2}$  to  $10^{-4}$  cm/sec based on Table 2. Hazen's equation (pg 8) would estimate a permeability of  $1.0$  to  $1.5 \times 10^{-2}$ . More sophisticated analysis and testing could be done in the field or laboratory, but it appears that the subgrade will meet or exceed the desired target permeability of  $5.4 \times 10^{-3}$  cm/sec or better. For the purpose of this example, the other site suitability limitations (e.g., depth to water table, slope, adjacent facilities, etc.) given earlier in the *Site Selection* portion of this report will be presumed to be met.

### Materials

The joint, bedding, and base course materials meet the limitations on suggested gradations and should have adequate permeability. Other requirements relating to quality, soundness, and durability will be presumed to be met for this example.

### Filter Requirements

Table 4 provides the filter requirements for preventing piping within the pavement materials, and these are expressed in terms of relative ratios of critical particle sizes. These are selected from Figure A1 in exactly the same manner as the  $D_{10}$  value for the subgrade was done for the calculation with Hazen's equation. These critical particle sizes are shown in Table A1 and are determined directly from the gradation curves in Figure A1.

| Table A1. Critical Particle Sizes in mm                                                                                                                                                                                                                           |          |          |          |          |          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|----------|----------|----------|
| Soil                                                                                                                                                                                                                                                              | $D_{10}$ | $D_{15}$ | $D_{50}$ | $D_{60}$ | $D_{85}$ |
| Subgrade                                                                                                                                                                                                                                                          | 0.10     | 0.12     | 0.25     | 0.32     | 0.63     |
| Base                                                                                                                                                                                                                                                              | 2.0      | 2.8      | 11       | 15       | 25       |
| Joint/Bedding Material                                                                                                                                                                                                                                            | 1.1      | 1.3      | 1.6      | 1.8      | 2.7      |
| Notes: $D_x$ is defined to be the particle size in mm from a soil's gradation curve for which x percent of the soil's particle are smaller, e.g., $D_{10}$ is the particle size for which 10 percent of a soil's particles are smaller and 90 percent are larger. |          |          |          |          |          |

These critical particle sizes are then used to check the filter criteria in Table 4. The Federal Highway/Corps of Engineers criteria from Table 4 will be used for this example and the results are shown in Table A2.

| Table A2. Comparison with Filter Criteria |                 |                 |                 |                       |
|-------------------------------------------|-----------------|-----------------|-----------------|-----------------------|
| Parameter                                 | $D_{15}/D_{15}$ | $D_{15}/D_{85}$ | $D_{50}/D_{50}$ | $C_u = D_{60}/D_{10}$ |
| FHWA/COE Criteria from Table 4            | $\geq 5$        | $\leq 5$        | $\leq 25$       | $\leq 20$             |
| Joint/Bedding Material to Base Course     | 2.2             | 1.04            | 6.88            | 7.5 (base)            |
| Base Course to Subgrade                   | 0.04            | 0.005           | 0.02            | 3.2 (subgrade)        |
| Subgrade to Base Course                   | 23.3            | 4.46            | 44              | 7.5 (base)            |

To properly interpret the filter criteria of Table 4, it is useful to understand the origin and intent of the various requirements. The  $D_{15}/D_{15}$  and  $D_{15}/D_{85}$  ratios are the original criteria developed from empirical tests for filters for soil mechanics applications during the first half of the twentieth century. The  $D_{15}/D_{15}$  ratio ensures that the permeability of the material (layer 1 in Table 4, also often referred to as the filter layer in soil mechanics texts) into which the water flows is much higher than the soil from which it exits. This avoids developing seepage pressures at the interface between the layers. For the SF-Rima™ pavement it ensures that the underlying material can drain the water in the layer above very rapidly, and no backup occurs in the upper layer. The  $D_{15}/D_{85}$  ratio checks that fine particles in layer 2 (often referred to as the protected soil in soil mechanics texts) cannot be carried by flowing water into the matrix of layer 1. The  $D_{50}/D_{50}$  ratio is another check added later to avoid internal erosion of particles. The  $C_u$  limitation tries to avoid problems with segregation (separating of the material into pockets of coarse and fine material in the course of its being handled by equipment) within the material during placement. The limitation that a filter material contain less than 5 percent passing the No. 200 sieve ( $D_5$  of layer 1  $\geq 0.074$  in Table 4) was added for filters in pavement systems that were between a subsurface drainage layer and another material in the pavement that was to be protected from internal erosion. This requirement was meant to minimize the amount of fine material in the filter that was available to wash into a drainage layer; desirable but again not mandatory.

For this example problem, we want to consider three potential interfaces where problems may develop as water flows from (1) the joint and bedding layer material (layer 2 in Table 4) to the base course material (layer 1 in Table 4), (2) base course to the subgrade, and (3) subgrade to the base course. The calculations for the filter criteria are shown in Table A2, and we will now examine the implications for each interface.

Joint/Bedding Layer to Base Course. The  $D_{15}/D_{85}$  and the  $D_{50}/D_{50}$  protection against internal migration of particles are easily met. Similarly, the desirable requirements for  $C_u$  and  $D_5$  are met. The problem arises with the  $D_{15}/D_{15}$  ratio to ensure high permeability; it fails to reach the desired level. Because this is a permeability issue as opposed to filtration, addition of a geotextile at the interface will not solve the problem. Ideally, either a finer bedding layer or a coarser base course is needed. The criteria for filters suggests that if the currently selected jointing/bedding material is used the  $D_{15}$  of the base course should be at least 6.5 mm which requires an open-graded aggregate. This can be met by changing to the open-graded aggregate

in Table 3, an ASTM size No. 57 stone for the base course, or by a coarser gradation of the rapid-draining material in Table 3. Alternatively, the joint/bedding layer could be changed so that its  $D_{15}$  value is no more than 0.56 mm. This is finer than the suggested gradation for joint/bedding materials so a change in the base course is needed.

Base Course to Subgrade. The permeability requirement ( $D_{15}/D_{15}$ ) is not met, but this is to be expected since the objective of the pavement is to allow infiltration to occur over time. The length of time this requires will be discussed in a following section. The requirements for internal erosion and piping and  $C_u$  are met.

Subgrade to Base Course. Normally water will flow from the base course to the subgrade, but the situation can be reversed. This may occur because of a rise in the water table or during the spring thaw period or more likely due to dynamic pressures of traffic or by water flowing in from the shoulders or sides of the pavement. These materials fail the  $D_{50}/D_{50}$  criteria for protection against internal erosion of particles (i.e., finer particles in the sand may wash into the base course material). This can be remedied by using a finer-graded subbase material between the base course and subgrade or by placing a geotextile to serve as a filter between the two materials.

In this example problem, the materials do not meet the specified filter requirements and alternate materials must be used. However, the remaining design calculations will be examined to illustrate the design steps.

### Storm-Water Runoff Calculations

The runoff coefficient for the Rational Method (pg 16) can be estimated for a SF-Rima<sup>TM</sup> pavement as

$$C = \frac{I-1.1}{I} = \frac{2-1.1}{2} = 0.45$$

Hence, the peak flow will be

$$Q = CIA = 0.45 \times 2 \times A = 0.9 \text{ cfs per acre of the site}$$

For this storm intensity, 1.1 in. of the rain will infiltrate into the pavement and only 0.9-in. has to be accommodated in another storm-water control system. This surface storm-water control system can then use other modern infiltration concepts such infiltration basins, subsurface reservoirs, or wells (Ferguson 1994) to obtain the maximum ecological benefit.

Conventional asphalt or concrete pavements would typically have C values of 0.8 to 1.0. Consequently, use of a SF-Rima<sup>TM</sup> pavement system has reduced the surface runoff to approximately half that required for a conventional pavement.



### Storage Capacity

The base course must provide sufficient storage capacity to hold the design storm water that infiltrates through the SF-Rima™ surface. To determine this one needs to know the dry density and the specific gravity of the base course material (pg 12). The dry density of the base course can be determined in the laboratory by running an appropriate compaction test representative of the final placement conditions (e.g., 95% modified density, 100% standard density, etc., see Rollings and Rollings 1996 for a discussion of compaction tests and specifications). The specific gravity of aggregates is also a simple laboratory test, and many aggregates will have a value of approximately 2.65. For this example, we will use a in-situ dry density of 135 lb/ft<sup>3</sup> and a specific gravity of 2.65. Then the volume of water that can be held within the voids in one cubic foot of base course aggregate will be

$$V = 1 - \frac{\gamma_d}{G_s \gamma_w} = 1 - \frac{135}{2.65 \times 62.4} = 0.18 \text{ ft}^3$$

Regulatory requirements will generally determine what quantity of water must be retained on site for the design storm. For example, if regulatory directives mandated that a 2-hour storm must be retained on site for our example, each square foot of SF-Rima™ pavement would have to be able to store 2.2-in. depth of water (2 x the long-term infiltration capacity of 1.1 in./hr) within the base course below. A 2.2-in. depth of water on 1 square foot (144 in.<sup>2</sup>) is 0.18 ft<sup>3</sup> or, coincidentally, the same volume as is available for storage in 1-cubic foot of base course aggregate in our example problem. Consequently, a full foot of base course aggregate thickness would be required to provide the necessary storage capacity for the regulatory requirement of a two hour storm retention for our problem.

The equations used for determining the permeability of a soil sample using a falling head permeameter (see Rollings and Rollings 1996 or any text on soil mechanics for these equations) can be adapted to give a rough approximation of how long it will take for the water in the base to drain out if the underlying subgrade is already saturated (i.e., steady-state flow into the subgrade is established). If the subgrade is not already saturated, the time will be shorter. The equation for this calculation is

$$t = \frac{D}{k} \ln \frac{D + h_b}{D}$$

where: t = time for water to drain out of base course

D = depth to the water table

k = permeability of the subgrade

h<sub>b</sub> = thickness of the base

If in our problem, the depth to the water table is 6 ft (1.8 m) and the subgrade permeability k, is 1 x 10<sup>-3</sup>, the one-foot (0.305-m) depth of base course following a 2 year design storm will

completely drain in about

$$t = \frac{180 \text{ cm}}{10^{-3} \text{ cm/sec}} \ln \frac{180 \text{ cm} + 30.5 \text{ cm}}{180 \text{ cm}} = 28,175 \text{ sec.}$$

This is roughly 8 hours. If the subgrade was a clayey sand (SC) or lean clay (CL) the permeability would be more on the order of  $10^{-7}$ . Substituting that permeability in the above equation would result in a drainage time of approximately 9 years. This illustrates the important impact that subgrade permeability has on the performance of permeable pavements.

### Structural Design

The pavement must also be structurally designed for the loads to be applied. Several approaches to this are described in the report. The simplest is to design a flexible pavement (asphalt surfaced) using the local state department of transportation methods and simply directly substitute the SF-Rima™ for the required thickness on a one-to-one basis (SF-Rima™ stone provides 3.1-in. of thickness, bedding layer is 1-in., and the base and subbase thicknesses are used to obtain the additional thickness needed to equal the total design thickness over the subgrade). In our example, the structural requirements will be modest (lightly loaded car dealership parking lot), and by almost any method, the design thickness for the base course for structural requirements will be less than the one-foot thickness required to hold the regulated storm. The thickness of base and subbase will always be the thickest needed for hydraulic storage requirements or structural design requirements.



CIA-VINEYARD LODGE  
Project No. 2016096  
September 2, 2016

**SUMMIT ENGINEERING, INC.**  
Hydrology and Hydraulic Calculations  
BY: CIP CHK: MS

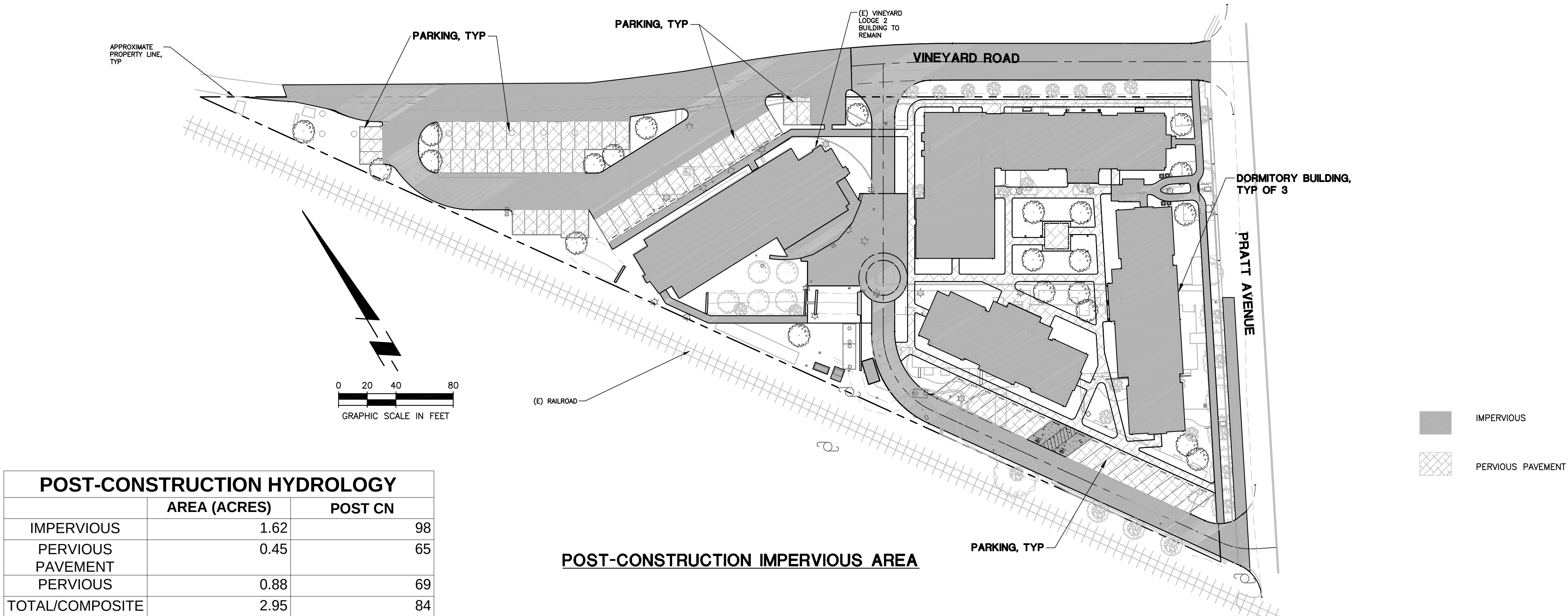
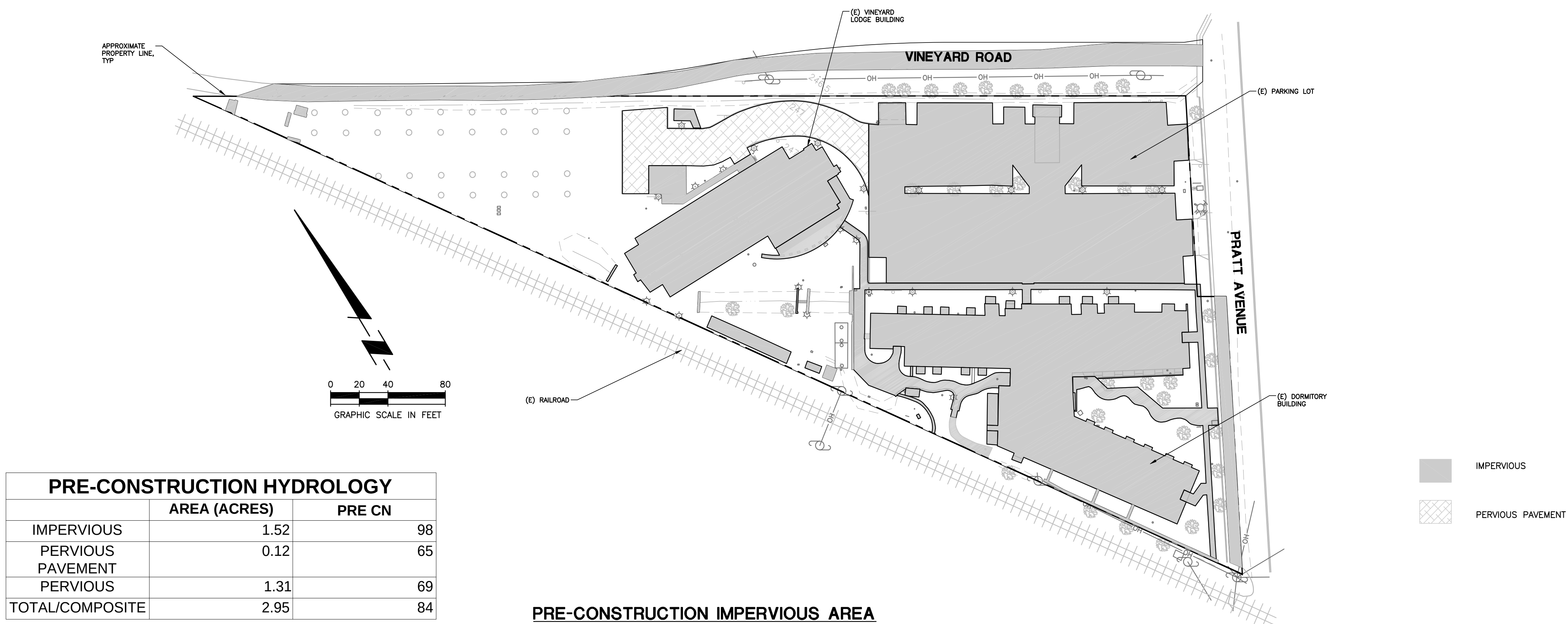
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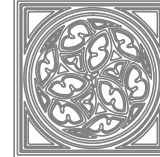
## **APPENDIX D: PRE-/POST-CONSTRUCTION HYDROLOGY MAP**





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THE CULINARY  
INSTITUTE OF  
AMERICA

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ST. HELENA, CA 94574

SHEET TITLE

PRE-/POST-  
CONSTRUCTION  
HYDROLOGY MAP

ISSUANCE  
DESIGN DEVELOPMENT

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Agenda Item #5.2.





**GEOTECHNICAL ENGINEERING STUDY – STORAGE CAVES  
THE CULINARY INSTITUTE OF AMERICA AT GREYSTONE  
2555 MAIN STREET  
ST. HELENA, CALIFORNIA  
ASSESSOR'S PARCEL NUMBER 009-131-003**

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**June 22, 2016**  
**Condor Project No. 6658**

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Log Legend and Soil Classification, Rock Properties, Boring Logs, and Core Photographs

APPENDIX B

Laboratory Test Reports



**GEOTECHNICAL ENGINEERING STUDY – STORAGE CAVES  
THE CULINARY INSTITUTE OF AMERICA AT GREYSTONE  
2555 MAIN STREET  
ST. HELENA, CALIFORNIA  
ASSESSOR’S PARCEL NUMBER 009-131-003**

## **1.0 INTRODUCTION**

This report presents the geotechnical engineering study performed by Condor Earth Technologies, Inc. (Condor) for the proposed storage caves at The Culinary Institute of America at Greystone. The site is about 1,250 feet southeast of the Deer Park Drive/St. Helena Highway Intersection. Figure 1 shows the approximate site location.

The entry tunnels for the caves will extend from an existing loading dock retaining wall and beneath an existing patio (an exterior concrete pavement). Section 2.0 presents a more detailed description of the proposed caves.

Condor presented our scope of work for this geotechnical engineering study in our December 16, 2015 Proposal and our April 8, 2016 Addendum. The purpose of the work was to:

- Provide geologic and geotechnical engineering data
- Develop conclusions regarding the potential for geologic hazards for the proposed improvements described in Section 2.0
- Develop geotechnical engineering conclusions and recommendations for design and construction of the proposed improvements described in Section 2.0.
- Address construction issues related to ground conditions and existing improvements above the proposed tunnels.

Condor will design the tunnels. We will present tunnel drawings and ground support calculations separately.

The design team provided Condor the following drawings:

- March 25, 1974 topographic survey map by H.J. Brunnier Associates, Engineers (Brunnier)
- April 14, 1995 structural engineering drawings by Culley Associates, Inc. (Culley)
- February 1, 2016 draft cave layout by Architectural Resources Group
- May 13, 2016 topographic survey map by Albion Surveyors & Land Use Consultants (Albion)

The Culley drawings are structural engineering plans and details for the patio (described as the “Terrace”). The Brunnier drawings show the topography that existed at the site before the patio existed and the Albion survey shows existing topography plus information from a recent underground utility survey. Condor used information from these three drawing sets for our engineering evaluations presented in this report and for our design of tunnel ground support.

Condor previously investigated site and subsurface conditions for a proposed storage cave southeast of the currently proposed cave site. The team then revised the conceptual design. We drilled borings B-1 and



B-2 for the former caves location, and we drilled B-3 and excavated test pits for the currently proposed location (see Figure 2). We used data from B-1 and B-2 for our geotechnical engineering study for the currently proposed caves. This report presents data from B-1 and B-2.

Condor will incorporate the recommendations in this report for our design of tunnel ground support. Condor and the construction team will use the data, information, discussions, conclusions, and recommendations for construction.

## 2.0 PROJECT DESCRIPTION

Figure 2 shows the pertinent aspects of existing site conditions and the proposed storage caves. The project will include constructing entry tunnels extending from two portals at the loading dock retaining wall. The loading dock retaining wall is a reinforced concrete wall over an older masonry retaining wall at the northwest end of the building. The contractors will create portals/entry tunnels by saw-cutting the perimeter of the portal openings on the loading dock retaining wall, demolishing/ removing the concrete within the saw cuts, exposing ground retained by the loading dock wall, and then mining the entry tunnels behind the openings. The portal openings will be 10 feet high and 10 feet wide.

A reinforced concrete frame will be doweled to the loading dock wall face around the sides and top of the perimeters of the portals to improve the structural capacity of the wall (which will be compromised by making the portal openings). The frame will be constructed before saw cutting and demolition.

The tunnel widths will be 8 to 14 feet. The cross section shapes will be constant radius with level inverts. The ground cover over the crowns of the entry tunnels will be 2 to 4 feet. Cover will be up to about 50 feet at the southwest side of the caves (where tunnels extend beneath the northeasterly descending hillside ground surface).

The tunnels will extend beneath an existing patio, retaining walls, a driveway, underground utilities, and landscape areas. The tunnels may be near an old masonry retaining wall buried beneath the existing ground surface (if it was not removed). The Brunnier drawings show this old retaining wall. Section 5.0 summarized pertinent information regarding the existing improvements.

Underground utilities may conflict with the proposed tunnel excavations. Such utilities, where known, would be removed, and excavations made for removal would be backfilled before tunnel construction.

Cave construction will consist of excavating the tunnels using mechanical means (backhoe, milling head, and/or roadheader), and sequentially supporting the excavations with reinforced shotcrete (initial support followed by final support). The tunnel floors will be cast-in-place reinforced concrete placed after completing the tunnel liner.

If the geotechnical engineering aspects of the project to be constructed vary significantly from Condor's description, then we should re-evaluate the conclusions and recommendations contained in this report.

## 3.0 SCOPE OF WORK

Condor's scope of work consisted of the following:

- Performing a site and subsurface investigation, as described in Section 4.0
- Presenting geologic data and information
- Presenting subsurface data



- Developing geotechnical engineering conclusions and recommendations for the following:
  - Anticipated subsurface and groundwater conditions at excavations for the tunnels
  - Seismic design according to the 2013 California Building Code (CBC) method
  - Seismicity
  - Potential for geologic hazards
  - Footings at the portal inverts (for design of frames around the portal openings)
  - Lateral earth pressures for evaluating the existing loading dock retaining wall (for design of frames around the portal openings) and the existing site retaining walls (for design of ground support for tunnels beneath site retaining walls)
  - Ground strength/stiffness parameters and criteria for design of tunnel ground support
  - Construction considerations

#### 4.0 SITE AND SUBSURFACE INVESTIGATION

Condor's site investigation consisted of observing, documenting and evaluating the geotechnical engineering aspects of the existing site conditions at the proposed tunnels and portals for the caves. This work included reviewing and evaluating the drawings by Culley, Brunnier, and Albion.

Condor investigated subsurface conditions by drilling three borings (B-1 through B-3) and excavating four test pits (TP-1 through TP-4). As mentioned in Section 1.0, Condor drilled B-1 and B-2 for a previously proposed site and used the data from these borings for this geotechnical engineering study.

Figure 2 shows the approximate test pit locations, approximate boring locations, and the pertinent aspects of site surface conditions. Appendix A contains the test pit logs, boring logs and core photographs. Section 5.0 presents a description of site conditions and Section 8.0 presents a description of subsurface conditions.

Condor's subcontractor drilled the borings using a CME-55 drill rig with augers and PQ-size rock coring equipment. They drilled the borings vertically. The boring depths were about 27.1 to 39.9 feet.

Our subcontractor circulated drilling fluids during drilling. They advanced the borings by making continuous core runs after drilling the first 2.5 to 5 feet using an auger. Each core run was about 2.5 to 5 feet long. They drove a split-spoon sampler with metal liners using a 140-pound hammer falling 30 inches (between core runs or after tripping-out auger). They used an auto-hammer hammer. The outside diameter of the sampler was about 3 inches and the diameter of the liners was about 2.5 inches. The boring log shows the number of blows made to drive the sampler over three consecutive 6-inch increments.

A Condor geologist performed the following:

- Observed the drilling
- Logged soil cuttings, the retrieved core, and split-spoon samples
- Recorded core recovery for the core runs (as a measured/estimated percentage of the total core run length) and blow-counts for the split-spoon sample
- Recorded other pertinent data
- Placed the retrieved core into boxes
- Capped and labeled the sample liners
- Photographed the retrieved core



Soon after they completed drilling, our subcontractor backfilled the borings with neat cement grout.

Laborers excavated the test pits using shovels and picks. A Condor geotechnical engineer and geologist obtained disturbed samples in bags and relatively undisturbed samples by hand hammering a drive sampler with a metal sample liner below nearly level surfaces in the test pits. The sampler has an approximate outside diameter of 2.5 inches and the diameter of the liners was about 2 inches. Condor logged exposed ground conditions, logged exposed foundation conditions (including measured dimensions and depths), recorded other pertinent data, labeled bag samples, and capped/labeled liner samples.

Condor classified soil using the Unified Soil Classification System and the visual-manual procedure, and characterized the engineering properties of the rock using the rock property terms presented in Appendix A.

Condor delivered the sample and retrieved core to our office for further examination and we selected samples for laboratory tests. We delivered the selected samples to our subcontracted laboratories. The laboratories performed the tests that follow:

- Particle size distribution
- Liquid and plastic limits
- Moisture content and dry density
- Staged triaxial consolidated undrained shear strength with pore pressure measurements
- Corrosivity

Appendix B contains the laboratory test reports and the logs in Appendix A summarize the test results.

## 5.0 SITE CONDITIONS

Figure 2 shows the pertinent aspects of site conditions. There is a patio (exterior concrete pavement) and other site improvements on the ground surface above the proposed cave tunnels. The landscape/paved driveway areas beyond the patio slope down to the east and northeast. A recent underground utility survey and site survey revealed the presence of underground utilities beneath the landscape and driveway area (and near the proposed tunnels).

The patio is elevated above the adjacent ground surface and bordered by a concrete retaining wall up to 4 feet high (that retains the ground that the patio bears on). A continuous footing supports the retaining wall. There are tie beams (reinforced concrete) aligned in a northwest/southeast direction beneath the patio slab.

Drawings for the Terrace (patio) indicate that Culley designed the retaining wall footings as 8-inches thick, 18-inches wide, centered along the wall centerline, and bottomed at 3 feet (minimum) below the final ground surface below the wall. Our test pits exposed portions of this footing (see Section 8.0). The drawings show that the design wall thickness is 12 inches.

The drawings show that Culley designed the tie beams with an 18-inch width and to bottom at 18 inches below the terrace surface.

Figure 2 shows the location of the old masonry retaining wall shown on the Brunnier drawings, which may still be in-place and buried beneath the existing ground surface. Data and our evaluations show that



the top of this wall is/was near or above the present-day ground surface. In addition, they show that the base of the wall (not including the foundations) is/was about 3.5 to 4 feet below the existing ground surface.

## 6.0 SITE GEOLOGY

Figure 3 shows the approximate site location on a published geologic map. The figure shows that the site is in an area with Pumiceous ash-flow tuff. Condor's borings and test pits encountered volcanoclastic alluvium of the Sonoma Volcanics beneath artificial fill. Section 8.0 contains information regarding conditions encountered in the test pits and borings.

## 7.0 EARTHQUAKE FAULTS

Figure 4 shows the approximate site location on a map showing known earthquake faults within at least 60 kilometers (km) of the site. The faults are grouped as "Historic" (evidence of movement over the last 150 years), "Holocene" (evidence of movement over the last approximately 150 to 15,000 years), "Late Pleistocene" (evidence of movement over the last approximately 15,000 to 130,000 years), and "Early Quaternary" (evidence of movement over the last approximately 130,000 to 1.6 million years). The nearest significant fault/fault-zones follow (group, fault/fault zone name - distance/direction from site):

- Historic: Green Valley Fault Zone (Historic segment) – about 43 km to the southwest; West Napa Fault (historic segment) – about 24 km to the southeast
- Holocene: Rodgers Creek Fault Zone – about 20 km to the southwest
- Late Pleistocene: Maacama Fault Zone – about 15 km to the west/southwest
- Early Quaternary: West Napa Fault Zone (early Quaternary segment) – about 1.6 km to the south

No known faults traverse the site.

A segment of the West Napa Fault is now historic because of movement that occurred from the 2014 South Napa earthquake. The epicenter was about 31 km to the south/southeast of the site and the approximate northern limit of rupture was about 24 km south/southeast of the site, based on available information for the United States Geological Survey.

## 8.0 SUBSURFACE CONDITIONS

B-3 and the test pits encountered artificial fill over volcanoclastic alluvium. The fill extended to as deep as 7 feet below the patio ground surface. B-1 and B-2 encountered volcanoclastic alluvium below the driveway pavement.

The fill encountered is stiff to very stiff lean clay to lean sandy clay (CL). The exception to this is in TP-4, where that excavation encountered fill consisting of sand. This sand fill appears to be underground utility trench backfill.

The encountered volcanoclastic alluvium is severely weathered and has the consistency of stiff to very stiff lean clay with sand/lean sandy clay (CL), stiff sandy silt (ML), and medium dense to dense clayey sand (SC). The borings encountered cobble- to boulder-sized volcanic rock in the soil-like matrix. The volcanic rock encountered is hard and strong.

Our test pits encountered no groundwater during excavation in April 2016. Drilling fluids would have obscured any groundwater encountered in the borings.



TP-1, TP-3 and TP-4 encountered the downslope sides of footings supporting the retaining walls around the border of the patio. Where encountered, the top of footing is about 2 feet below the existing ground surface, is relatively level, and extends at least 8 inches downslope from the downslope face of the wall stem. Where the footing bottom was exposed (in TP-1 and TP-4), it extends about 12 inches below the top of footing (or to a depth of 3 feet below the ground surface).

## 9.0 CONCLUSIONS AND RECOMMENDATIONS

Based on our evaluation, Condor concludes that construction of the proposed improvements described in Section 2.0 is feasible from a geotechnical engineering standpoint.

Condor anticipates that excavations for the tunnels, where free of existing improvements, will expose up to 2 feet of artificial fill over volcanoclastic alluvium. We anticipate that the fill will consist of stiff to very stiff lean clay to sandy lean clay (CL). We anticipate that the volcanoclastic alluvium will be severely weathered and will have the consistency of stiff to very still lean clay with sand/sandy lean clay (CL), sandy silt (ML), and medium dense to dense clayey sand (SC). We anticipate that the volcanoclastic alluvium will contain cobble-to boulder-sized volcanic rock that is strong and hard.

The tunnel excavations may encounter footings supporting existing retaining walls, the old buried masonry retaining wall, unknown underground utilities, and other unknown underground facilities. Condor anticipates that a masonry footing supports the old wall. There may be granular backfill in unknown underground utility trenches or behind the old retaining wall.

Some underground utilities may be removed where they conflict with the proposed tunnels. The Contractor would backfill excavations for removed utilities according to recommendations in this report (cementitious backfill or compacted clay backfill). New trenches should be set back at least 3 feet from tunnel excavations.

Condor anticipates that minor to moderate groundwater seepage will occur in ground around the tunnels and behind the portals during the wet season, as water perched over clay layers, as water in ground fractures, and as water in granular backfill.

Condor anticipates that the primary geotechnical engineering issues to address are:

- The possible need to remove existing underground utilities (and backfill the excavations)
- Construction considerations related to mining in conditions with low ground cover and the need to reduce distress of existing site improvements
- Developing recommended ground parameters and loading conditions for tunnel ground support

Excavations made to remove underground utilities or for other reasons, and that extend to within 2 to 3 feet of the proposed tunnel excavations, should be backfilled in a manner intended to facilitate subsequent tunneling. Condor recommends that such excavations be backfilled with controlled density fill or compacted clayey soil. Granular backfill should not be used because such material would be more likely to ravel into tunnel excavations. This could cause fallout voids that could undermine existing improvements. In addition, the cost of backfilling fallouts during tunnel construction is higher. Section 9.4 presents specific recommendations.

Ground failures during tunnel excavation and prior to placing support could damage existing site improvements over tunnel excavations. Because ground cover is low, even small ground failures at the



tunnel crowns during excavation could undermine improvements. There may be unknown granular artificial fill exposed in tunnel excavations (backfill of unknown former excavations). Such ground may have relatively low stability. Tunnel excavations may encounter known or unknown footings. For these reasons, the Contractor may need to place initial support quickly. They should be prepared to provide temporary shoring to facilitate excavation through granular fill and to excavate existing concrete and masonry footings. Section 9.8 presents specific recommendations.

The tunnel liner needs to be designed to carry both loads from the ground weight and loads imposed on them from the existing site improvements and traffic. Re-supporting existing retaining walls by structurally connecting them to tunnel liners may be required. Section 9.5 presents specific recommendations.

The subsections that follow present Condor's conclusions and recommendations. Where referred to herein, "Geotechnical Engineer" means Condor, Condor's representative or other qualified geotechnical engineer.

### 9.1 SEISMIC DESIGN

Condor recommends using the following values for seismic design according to the 2013 CBC:

|             |                                                |
|-------------|------------------------------------------------|
| Site Class: | C                                              |
| $S_S$ :     | 1.500 g (where g is acceleration from gravity) |
| $S_1$ :     | 0.600 g                                        |
| $S_{MS}$ :  | 1.500 g                                        |
| $S_{M1}$ :  | 0.780 g                                        |
| $S_{DS}$ :  | 1.000 g                                        |
| $S_{D1}$ :  | 0.520 g                                        |

### 9.2 SEISMICITY

Condor estimated peak ground-surface acceleration ( $PGA_M$ ) using the geotechnical engineering design criteria for seismic design in Section 9.1 and other design procedures in the CBC (ASCE 7-10). Based on the results and procedures, Condor recommends using a design peak ground-surface acceleration of 0.5 g. We note that the 2014 South Napa earthquake caused a PGA acceleration of about 0.1 g at the site.

### 9.3 GEOLOGIC HAZARDS

Figure 5 shows the approximate site location on a geologic map showing landslide deposits. The map shows that there are no landslides at our upslope of the site. Condor saw no indication of natural landslides at the site (from our observation/evaluation of site conditions and subsurface conditions encountered in our test pits and borings), but observed collapse features and surface ground instability south of the proposed storage cave area (related to the collapse of historic tunnels). We therefore conclude that the potential for landslides is low in the area of the storage caves and that no additional evaluation and mitigation for landslides is required in that area.

The site is not located within an Earthquake Fault Hazard Zone (Bryant and Hart, 2007), and there are no known faults at the site. The nearest know fault zone is 1.6 km from the site (see Section 6.0). Condor therefore concludes that the potential for ground surface rupture from faulting is low, and that no additional evaluation or mitigation for fault hazards is required.





Our site and subsurface evaluation reveals that there is no loose sand beneath the site. Condor therefore concludes that the potential for liquefaction, ground displacement from liquefaction, and cyclic densification is low. In addition, we conclude that no additional evaluation or mitigation for these hazards is required.

Figure 6 shows the approximate site location on an ultramafic rock map. The map shows that the site is not in an area with ultramafic rock (ground that is more likely to contain naturally occurring asbestos). Furthermore, Condor observed no ultramafic rock on the project site and our borings encountered no such rock. Condor concludes that the risk of hazards from naturally occurring asbestos for the project is low, and that no additional evaluation or mitigation for this hazard potential is required.

Figure 7 shows the approximate site location on a radon hazard map for the state of California. The Environmental Protection Agency-recommended action level is 4 picocuries per liter. The map shows Napa County in Zone 3, defined as an area having a low potential for radon levels (less than 2 picocuries per liter). Condor therefore concludes that the potential for radon hazard is low, and that no additional evaluation or mitigation for this hazard is required.

Condor's subsurface data and our evaluations indicate that the soil at the site has a low to medium plasticity. It therefore has a low potential for volume changes from wetting/drying and is not considered "expansive soil." We therefore conclude that hazards associated with expansive soil are low and that no additional evaluations or mitigation is required. Condor should evaluate the potential for volume-changes for imported fill material.

## **9.4 EARTHWORK**

The subsections that follow present Condor's recommendations for earthwork.

### **9.4.1 Excavations**

The Contractor is responsible for the stability of temporary excavations and their excavation work should comply with applicable Cal/OSHA regulations (California Construction Safety Orders). A competent person shall determine the soil type and requirements for temporary cutslope heights and inclinations during excavation. The Contractor's competent person should regularly monitor all open cuts for evidence of incipient stability failures.

Section 9.8 presents Condor's conclusions and recommendations regarding excavation and support sequence for constructing tunnels for the caves.

### **9.4.2 Subgrade Preparation**

Section 9.9 presents specific recommendations for preparing tunnel floor subgrades.

Subgrades that become dry and/or disturbed should be scarified, moisture conditioned to near optimum to facilitate compaction, and recompacted. The Geotechnical Engineer should approve subgrades soon before they are covered.

Subgrade preparation is generally not required for bottoms of utility trenches unless there is unsuitable or unstable material exposed. We anticipate that bottoms of utility trenches will expose suitable and adequately stable ground.



### 9.4.3 Utility Trenches

Below-grade utilities should be bedded and backfilled according to the requirements of the service provider (utility company) and the county. Where there are no specific requirements, Condor recommends placing free-draining bedding sand or crushed-rock with a maximum particle size of  $\frac{3}{8}$ -inch from 3 inches below to 1 foot above the conduit or pipe. Bedding sand should have a sand equivalent of at least 30. Bedding material and backfill should not be jetted or ponded into place but should be mechanically compacted.

### 9.4.4 Engineered Fill

Engineered fill should have less than 2 percent by dry weight of vegetation and deleterious material and should meet the particle-size distribution requirements presented on the table that follows:

| Sieve Designation          | Minimum Percent Passing by Dry Weight |
|----------------------------|---------------------------------------|
| 4-inch square              | 100                                   |
| $\frac{3}{4}$ -inch square | 70                                    |
| U.S. No. 4                 | 60                                    |

To improve ground stability for tunnel excavations, backfill of any excavation within 2 to 3 feet of tunnel excavations should be cohesive. It may consist of soil material with a Unified Soil Classification System classification of CL, ML, CL-ML or SC (lean clay to sandy lean clay, silt, silty clay or clayey sand). Otherwise, the backfill material near tunnel excavations may consist of control density fill with a 28-day compressive strength of at least 100 pounds per square inch (psi).

Soil fill placed within 12 inches of building slab-on-grade floors, exterior pavements should be select fill with a plasticity index of 15 or less. Otherwise, fill should have a liquid limit of 50 or less and a plasticity index of 20 or less. Aggregate layers beneath floor slabs may be included in the total thickness of select fill.

Engineered soil fill should be moisture conditioned to near optimum (to facilitate compaction) and compacted to at least 90 percent (based on ASTM Test Method D-1557). Trench backfill placed more than 5 feet beyond the edges of structures, pavements, slabs-on-grade, or other improvements may be compacted to 85 percent (based on ASTM Test Method D-1557). Soil fill should be placed in horizontal lifts that are less than 8 inches in uncompacted thickness, and each lift should be compacted to the requirements prior to placing subsequent lifts.

## 9.5 TUNNEL GROUND SUPPORT

Condor recommends using the Mohr-Coulomb failure criteria to model the ground. We developed parameters based on our subsurface data and experience.



Condor developed an idealized subsurface profile to use for tunnel liner analyses. A summary of our subsurface profile follows:

| Depth Increment (feet below patio) | Material Description    | Strength Parameters or Index                                                                                                                  | Total Unit Weight (pcf) |
|------------------------------------|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| 0 to 7                             | Fill                    | Internal friction angle = 24 degrees<br>Cohesion = 170 pounds per square foot (psf)<br>Young's Modulus = 10,000 psi<br>Poisson's Ratio = 0.35 | 125                     |
| 7 to 80                            | Volcaniclastic Alluvium | Internal friction angle = 31 degrees<br>Cohesion = 250 psf<br>Young's Modulus = 12,000 psi<br><br>Poisson's Ratio = 0.35                      | 120                     |

Condor recommends modeling plastic behavior and a dilation angle of 0 degrees and residual shear strengths equivalent to peak strengths. We recommend using a total stress ratio of 0.5.

The tunnel liners should be designed to carry loads from the ground weight, improvements (existing and proposed), and traffic imposed on ground above (and adjacent to) tunnels. Condor should re-evaluate design of any proposed improvements over the tunnel after plans for such improvements are available. We recommend using a surface pressure of 250 psf to model traffic surcharge. If existing retaining walls have footings that are mined, the tunnel liner should be designed to carry the wall loads. Section 9.7 presents criteria for evaluating retaining wall loads.

Condor recommends placing drain strips behind tunnel liners and subdrains beneath tunnel floors. Because we anticipate that there will be little groundwater seepage and because there will be drainage, we conclude that the ground support analysis may assume that no pore pressures from groundwater are imposed on the liners. Tunnel floor subdrains should slope to the portals to facilitate subdrain discharge. Water seepage mitigation may be added to the tunnel liner to reduce groundwater infiltration that will typically otherwise occur in some locations.

Sequential placement of the slab-on-grade floor at the tunnel invert is not desirable because cave construction typically requires back and forth equipment traffic from the portals for excavation, mucking, and tunnel liner construction. The design may include footings at the liner base or subinverts placed for initial support, if necessary.

## 9.6 FOOTINGS

Footings at the proposed tunnel inverts, if needed, may be designed using a net allowable bearing capacity of 4,000 psf for dead plus normal duration live loads. This value may be increased by one-third for total load conditions, including wind and seismic.

For resistance to lateral loads, base friction resistance may be calculated using an ultimate friction coefficient of 0.35. Passive resistance may be calculated using a uniform pressure of 3,300 psf (rectangular distribution) for transient loads, such as seismic loads, and an equivalent fluid unit-weight



(triangular distribution) of 200 pcf for sustained loads. We reduced the allowable passive pressure by a factor of 1.5 from the ultimate value to limit the foundation movement required to mobilize passive pressure. Both passive pressure and base friction may be combined in calculating total lateral resistance without reduction. Passive resistance contributed by the top 12 inches of soil should be neglected unless a concrete slab-on-grade or pavement covers the ground. Gaps between footings or keyway and the adjacent ground should be completely backfilled using engineered fill, concrete or lean cement slurry with a 28-day unconfined compressive strength of at least 100 psi.

## 9.7 RETAINING WALLS

Condor developed geotechnical engineering criteria to evaluate loads imposed by the existing loading dock retaining wall and the existing site retaining walls near the patio. Active earth pressures may be used to evaluate unrestrained retaining walls where the top of the wall is free to translate or rotate. To develop active earth pressures, the walls should be capable of deflecting by at least  $0.004H$  (where  $H$  is the height of the wall). At-rest earth pressures should be used to evaluate retaining walls where the wall top is restrained such that the deflections required to develop active soil pressures cannot occur. We recommend using the following equivalent fluid unit-weights.

| Equivalent Fluid Unit Weight (pcf) |                   |                    |
|------------------------------------|-------------------|--------------------|
| Backfill Slope                     | Active Conditions | At-Rest Conditions |
| Level                              | 45                | 75                 |

The static lateral earth pressures should be applied behind the wall from the finish ground surface down to the footing heel.

## 9.8 CONSTRUCTION CONSIDERATIONS

Condor anticipates that the ground exposed in tunnel excavations will be cohesive soil with moderate strength. We therefore anticipate that standup time for the proposed tunnel excavations will be moderate, and that sequential excavation followed by ground support (initial tunnel liner construction followed by final tunnel liner and floor construction) is feasible. Standup time is the time elapsed after tunnel excavation and before completing initial support where unsupported ground is stable.

There is, however, the possibility that tunnel excavations will encounter soft or loose cohesionless granular fill from previous site development or from natural alluvial processes. Such material, if encountered, may be less stable, may result in shorter standup time, and may pose the need for shoring in advance of excavation (spiling, ground grouting, etc.).

As discussed in section 9.0, ground failures during tunnel excavation and prior to placing support could damage existing site improvements over tunnel excavations. Condor therefore recommends that that Contractor be prepared to improve ground stability where tunnel excavations expose any unknown granular fill. In addition, we recommend that the Contractor excavate tunnels in a single heading while completing initial ground support from invert edge, across the arch, and to the adjacent invert edge.

Condor recommends that the Contractor review available site and subsurface data and to evaluate the best approach to sequential excavation and support. The Contractor is responsible for temporary support and timing for initial support placement for safety. Condor, in consultation with the Contractor, should determine final support requirement based on the strength and stiffness of encountered ground and the Contractor's method of excavation and support.



As discussed in Section 9.0, tunnel excavations may encounter concrete footings, masonry footings, or other underground obstructions. The Contractor should be prepared to excavate footings or other unknown obstructions.

Where subgrades for tunnel floors are soft/loose, the contractors should stabilize subgrades to provide adequate pavement support as follows:

- Overexcavate to a depth of at least 12 inches
- Where overexcavation bottoms are firm, backfill them with crushed rock or lean concrete
- Where overexcavation bottoms are soft/loose, backfill them with lean concrete; otherwise, place a subgrade stabilization geotextile over the overexcavation bottom and backfill overexcavations with crushed rock

A subgrade stabilization geotextile such as Mirafi 500X may be adequate. Where subgrades are very soft and wet, then a heavier geotextile, such as Mirafi HP 570 may be required. The Geotechnical Engineer should approve procedures for overexcavating, backfilling, and geotextiles. Subgrades beneath pavements should be firm and free of significant deflections under relatively heavy construction equipment. The Contractor should “proof roll” subgrades and stabilize deflecting areas before covering them.

## 10.0 ADDITIONAL SERVICES

Because subsurface conditions at this site vary, it is not possible to include all construction details related to geotechnical engineering aspects of the project in designs. Geotechnical engineering recommendations depend on the possible need for adjustment in the field during construction. The adjustments depend on conditions revealed during construction that Condor could previously only assume based on limited data from the site investigation. Therefore, Condor or another qualified firm should perform geotechnical engineering observations and tests during construction. The purpose of the work during construction will be to check for subsurface conditions that vary from the conditions encountered during site investigation and to develop supplemental geotechnical engineering recommendations, as necessary. In addition, the purpose is to verify that the Contractor follows the general intent of our recommendations during construction and that they perform the geotechnical engineering aspects of the work according to the approved designs.

Because Condor understands the intent of the geotechnical engineering recommendations best, we recommend that Condor perform or direct future phases of tunnel civil/geotechnical engineering work, including field engineering, inspection and testing.

## 11.0 LIMITATIONS

The geotechnical engineering conclusions and recommendations presented in this report are intended for planning and design of the proposed improvements described in Section 2.0. These conclusions and recommendations may not apply if:

- The report is used for a different site or project
- The recommendations presented in this report are not followed
- Any other change is made that materially alters the proposed project

Condor based the conclusions and recommendations presented in this report on data obtained from the site investigation described in Section 4.0. Subsurface conditions may vary between and around the investigated locations. Should varied conditions be discovered during construction, then additional



investigation, testing evaluations and development of supplemental recommendations may be required. Any person associated with the project who observes conditions or features of the site or its surrounding areas that are different from those described in the report should report them immediately to Condor for evaluation.

Implementation of our recommendations requires an adequate testing and observation program during construction as described in Section 10.0. If Condor does not perform this testing and observation, then the Geotechnical Engineer that is responsible for observation and testing should thoroughly review this report and agree with its conclusions and recommendations or, otherwise, they should provide alternative recommendations.

Condor prepared this report according to the generally accepted standards of geotechnical engineering practice that exist in Napa County at the time of issue. No other warranty, express or implied, is made. It is the Owner Representative's responsibility to see that all parties to the project, including the designers, Contractors and Subcontractors, are made aware of this report in its entirety.

Changes in the standards of practice in the field of geotechnical engineering, changes in site conditions such as new excavations or fills, new agency regulations, or modifications to the proposed project warrant professional review of this report. Because of this, there is a practical limit to the usefulness of this report without critical professional review. We suggest that 2 years be considered a reasonable time for the validity of this report.

## 12.0 CLOSURE

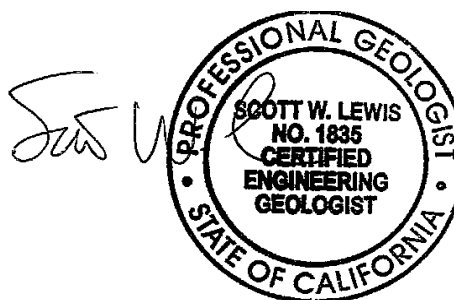
Please contact Condor if you have any questions.

Respectfully submitted,

CONDOR EARTH TECHNOLOGIES, INC.



Andrew S. Kositsky, GE No. 2532  
Senior Geotechnical Engineer



Scott W. Lewis, CEG No. 1835  
Principal Engineering Geologist

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Geotechnical Engineering Study – Storage Caves  
The Culinary Institute of America at Greystone  
Architectural Resources Group, Inc.  
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## REFERENCES

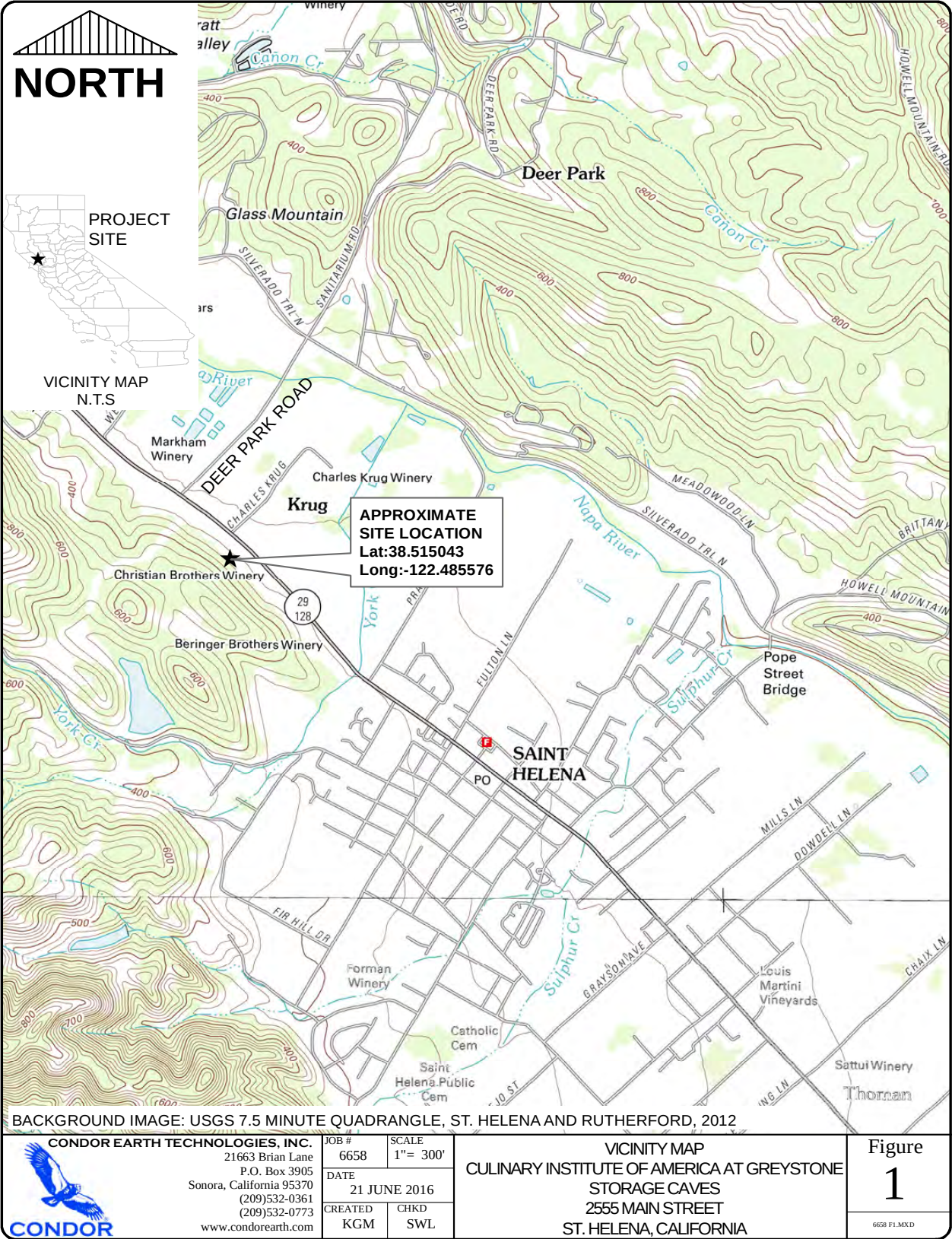
- Bryant, W.A., Hart, E.W. (2007). Fault-rupture hazard zones in California, California Department of Conservation, California Geological Survey, Special Publication 42
- California Building Standards Commission (2013) California Building Standards Code, California Code of Regulations, Title 24



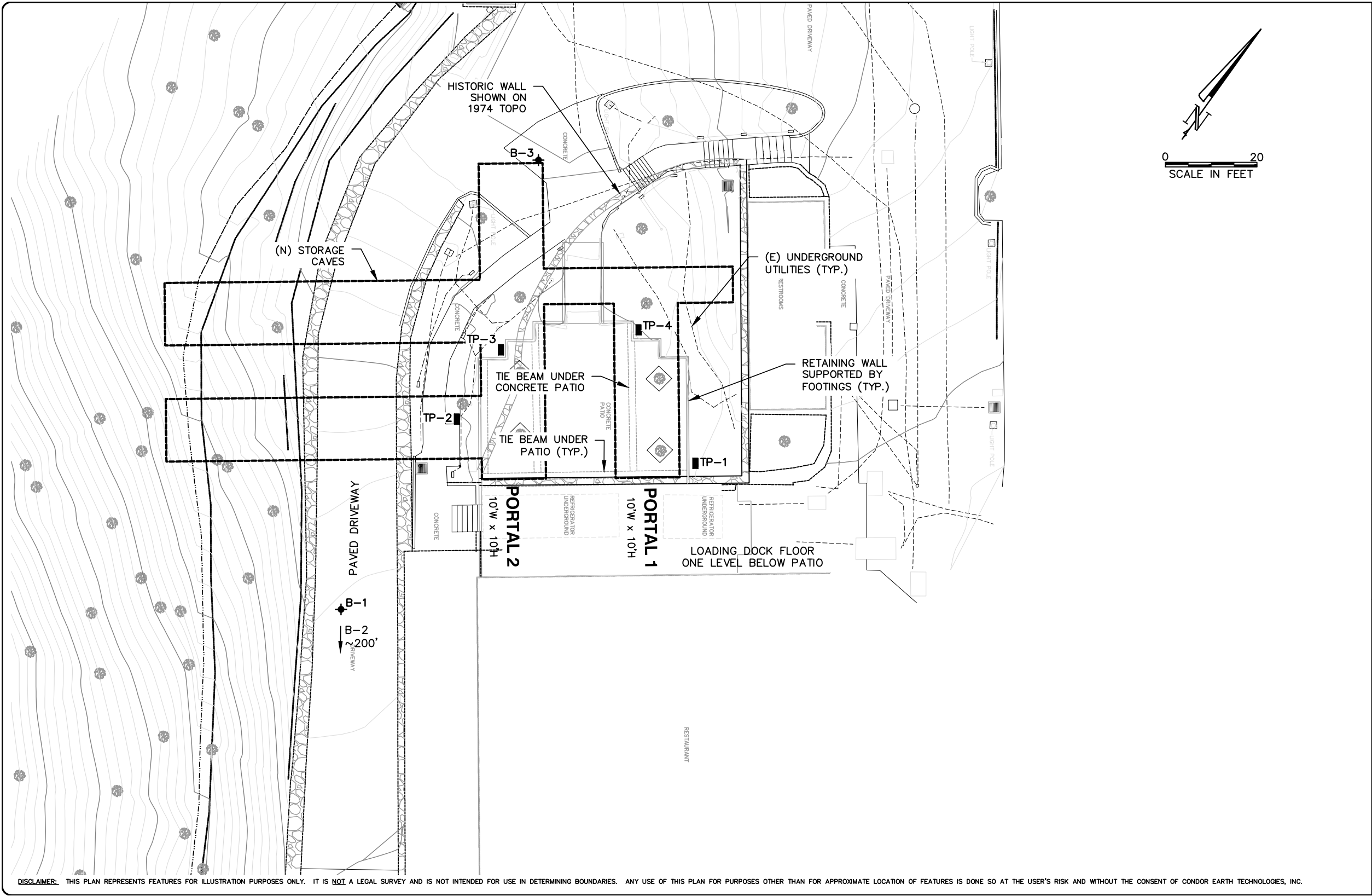
## FIGURES







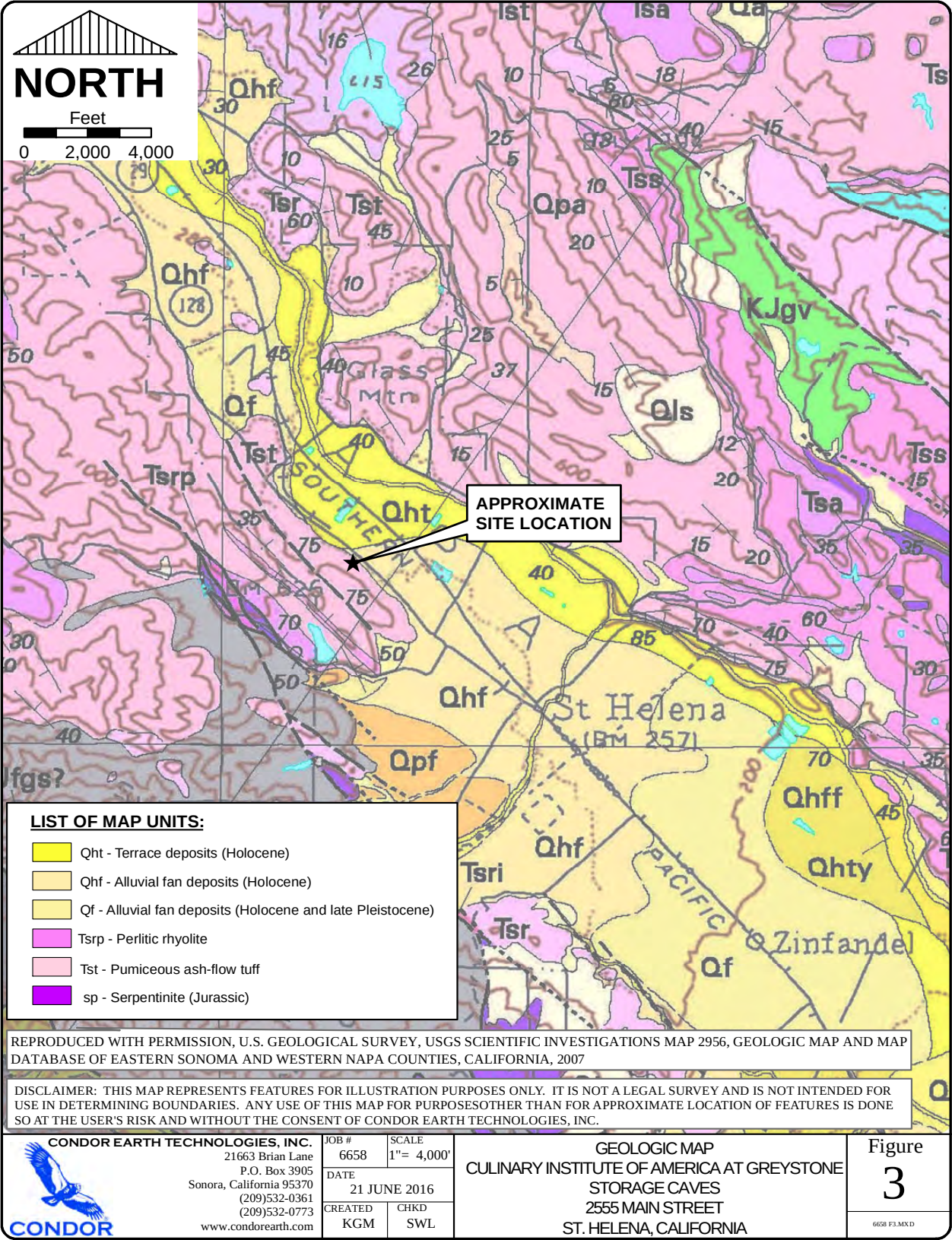
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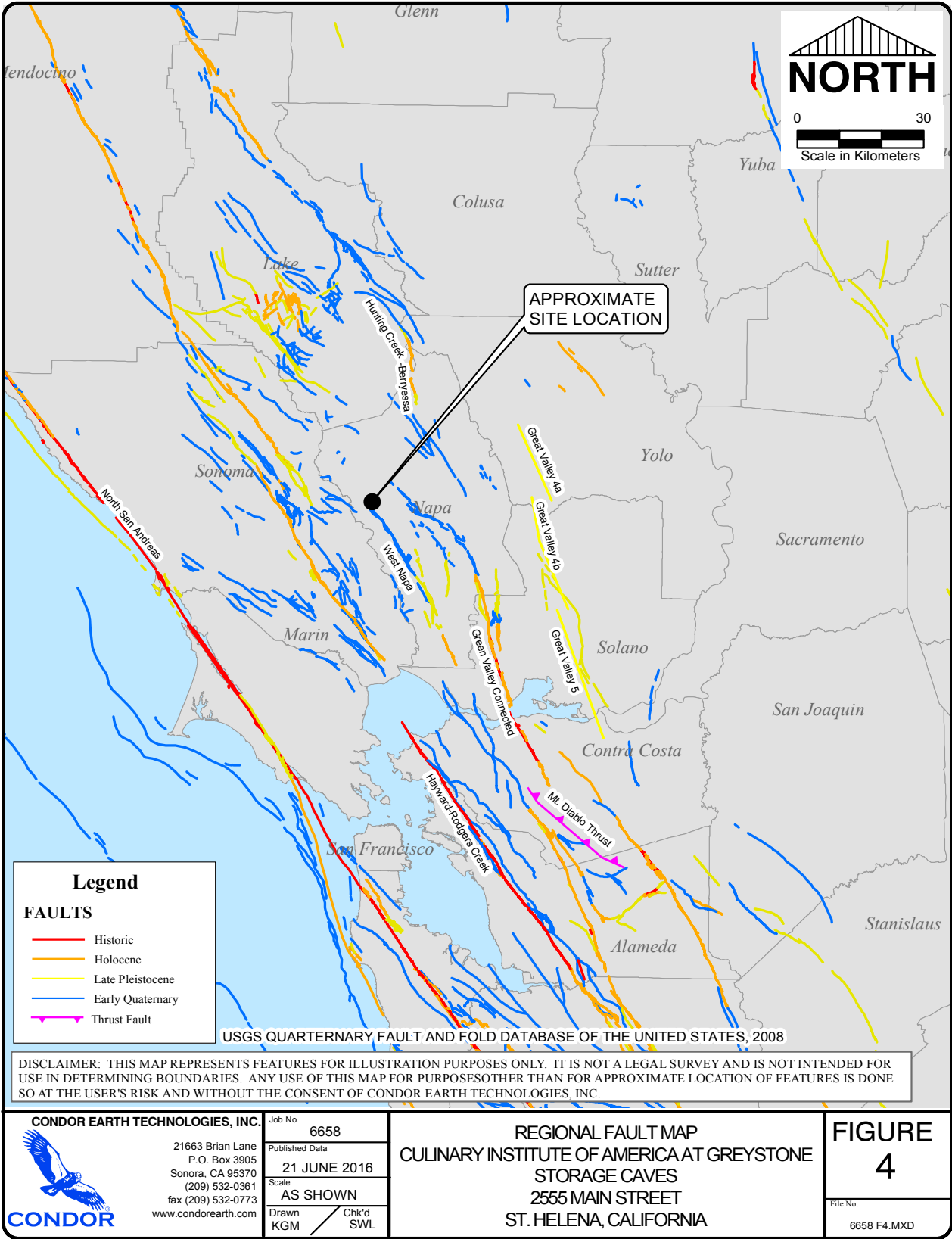


|                                                                                                                                                        |                                                                                                                               |              |           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------------|-----------|
|                                                                   | <b>SITE PLAN</b><br>CULINARY INSTITUTE OF AMERICA AT GREYSTONE<br>STORAGE CAVES<br>2555 MAIN STREET<br>ST. HELENA, CALIFORNIA |              |           |
|                                                                                                                                                        | Job No.                                                                                                                       | 6658         |           |
|                                                                                                                                                        | Date                                                                                                                          | 22 JUNE 2016 |           |
|                                                                                                                                                        | Scale                                                                                                                         | AS SHOWN     |           |
| CONDOR EARTH TECHNOLOGIES, INC.<br>21663 Brian Lane<br>P.O. Box 3905<br>Sonoma, CA 95370<br>(209) 532-0361<br>fax(209) 532-0773<br>www.condorearth.com | Drawn                                                                                                                         | KGM          | Chk'd SWL |
|                                                                                                                                                        | File No.                                                                                                                      | 6658_F2      |           |

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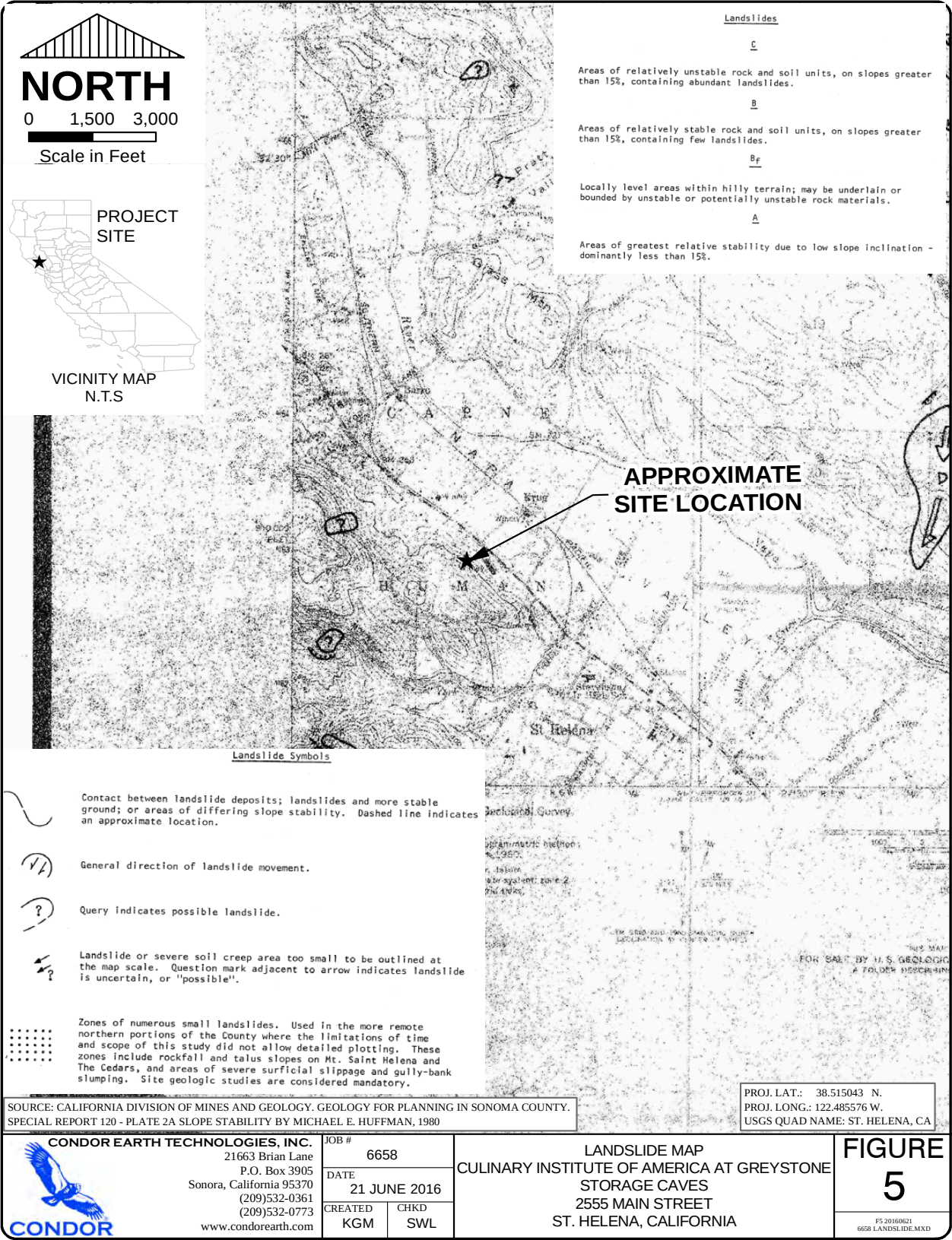




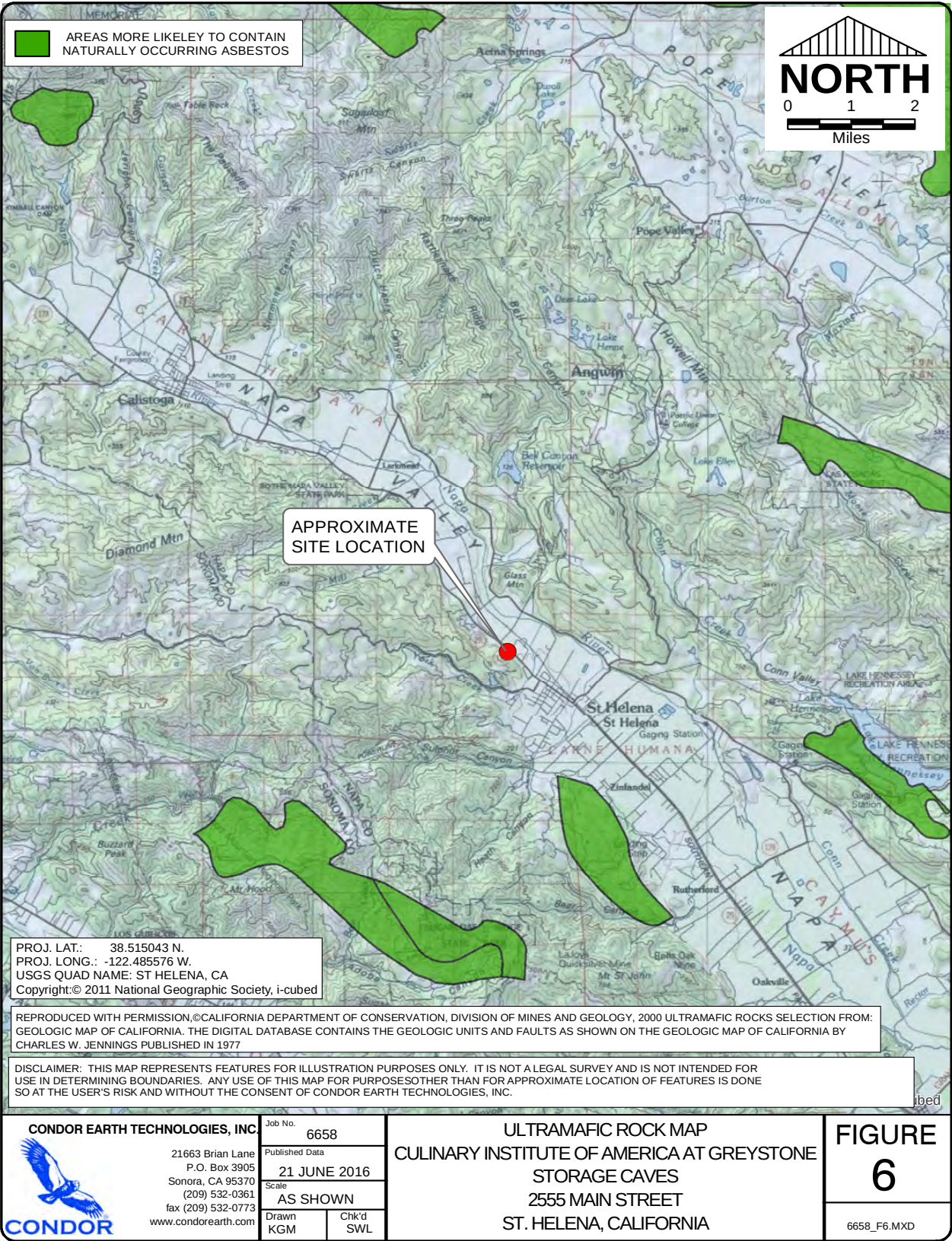


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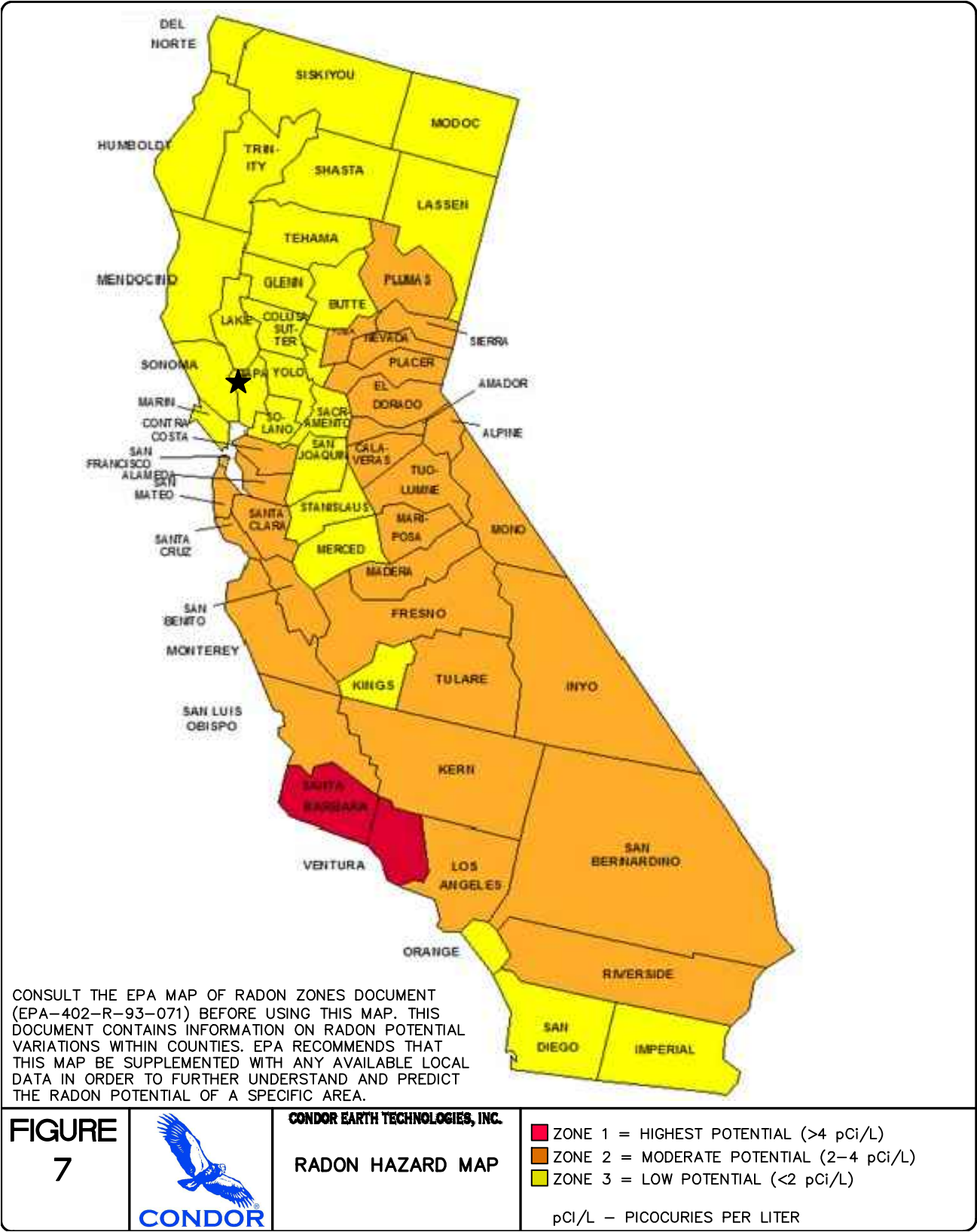








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## **APPENDIX A**

### **Log Legend and Soil Classification, Rock Properties, Boring Logs, and Core Photographs**





**WEATHERING**

**Severely Weathered** – minerals decomposed to soil, but rock fabric and structure are preserved.

**Highly Weathered** – abundant fractures coated with oxides, carbonates, sulphates, mud, etc., thorough discoloration, rock disintegration, mineral decomposition.

**Moderately Weathered** – some fracture coating, moderate or localized discoloration, little to no effect on cementation, slight mineral decomposition.

**Slightly Weathered** – a few stained fractures, slight discoloration, little or no effect on cementation, no mineral decomposition.

**Fresh** – unaffected by weathering agents; no appreciable change with depth.

**FRACTURE, JOINT, OR SHEAR SPACING**

(Spacing in Inches)

|                               |                 |
|-------------------------------|-----------------|
| <b>Very little fractured</b>  | Greater than 48 |
| <b>Occasionally fractured</b> | 12 to 48        |
| <b>Moderately fractured</b>   | 6 to 12         |
| <b>Closely fractured</b>      | 1.25 to 6       |
| <b>Intensely fractured</b>    | 0.5 to 1.25     |
| <b>Crushed</b>                | Less than 0.5   |

**THICKNESS OF SEDIMENTARY ROCK BEDS**

(Thickness in Inches)

|                            |                 |
|----------------------------|-----------------|
| <b>Very thickly bedded</b> | Greater than 72 |
| <b>Thickly bedded</b>      | 24 to 72        |
| <b>Medium bedded</b>       | 8 to 24         |
| <b>Thinly bedded</b>       | 2.5 to 8        |
| <b>Very thinly bedded</b>  | 0.75 to 2.5     |
| <b>Laminated</b>           | 0.25 to 0.75    |
| <b>Thinly laminated</b>    | Less than 0.25  |

**FRACTURE OR LAYER SEPARATION**

(Thickness of Separations in Millimeters)

|                        |              |
|------------------------|--------------|
| <b>Very tight</b>      | < 0.1 mm     |
| <b>Tight</b>           | 0.1 – 0.5 mm |
| <b>Moderately open</b> | 0.5 – 2.5 mm |
| <b>Open</b>            | 2.5 – 10 mm  |
| <b>Very wide</b>       | > 10 mm      |

**FRACTURE OR LAYER ROUGHNESS**

|                                |                                        |
|--------------------------------|----------------------------------------|
| <b>Very Rough</b>              | - Non-continuous, Hard joint rock wall |
| <b>Slightly Rough</b>          | - Hard joint rock wall                 |
| <b>Slightly Rough and Soft</b> | - Soft joint rock wall                 |
| <b>Slickensided</b>            | - Open and continuous with gouge       |
| <b>Soft Gouge</b>              | - Open and continuous with soft gouge  |

**STRUCTURE**

**Intact/Massive** – intact rock specimens with few widely spaced discontinuities.

**Blocky** – well interlocked, undisturbed rock mass, consisting of cubical blocks formed by three intersecting joint sets.

**Very blocky** – interlocked, partially disturbed, with multi-faceted angular blocks formed by 4 or more joint sets.

**Disturbed/Seamy** – folded with angular blocks, formed by many intersecting joint sets, persistence of bedding planes or schistosity.

**Disintegrated** – poorly interlocked, heavily broken, mix of angular and rounded rock pieces.

**Laminated/Sheared** – lack of blockiness due to close spacing of shear planes.

**STRENGTH**

**Plastic** or very low strength.

**Friable** – crumbles easily by rubbing with fingers.

**Weak** – an unfractured specimen of such material will crumble under light hammer blows.

**Moderately strong** – specimen will withstand a few heavy hammer blows before breaking.

**Strong** – specimen will withstand a few heavy ringing hammer blows and will yield with difficulty only dust and small flying fragments.

**Very strong** – specimen will resist heavy ringing hammer blows and will yield with difficulty only dust and small flying fragments.

**HARDNESS**

**Soft** – reserved for plastic material alone.

**Low hardness** – can be gouged deeply or carved easily with a knife blade.

**Moderately hard** – can be readily scratched by a knife blade; scratch leaves a heavy trace of dust and is readily visibly after the powder has been blown away.

**Hard** – can be scratched with difficulty; scratch produced a little powder and is often faintly visible.

**Very hard** – cannot be scratched with knife blade; leaves a metallic streak.

**GROUND WATER**

Dry

Damp

Wet

Dripping

Flowing



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**ROCK PROPERTIES**

| UNIFIED SOIL CLASSIFICATION SYSTEM                                           |                               |              |                                                                                                                                                                                                                  |
|------------------------------------------------------------------------------|-------------------------------|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Division                                                                     |                               | Group Symbol | Group Name                                                                                                                                                                                                       |
| Coarse-Grained Soils<br>(more than 50 percent retained or the No. 200 sieve) | Gravel<br>(% gravel > % sand) | GW           | Well-graded Gravel (with Sand)                                                                                                                                                                                   |
|                                                                              |                               | GW-GM        | Well-graded Gravel with Silt (and Sand)                                                                                                                                                                          |
|                                                                              |                               | GW-GC        | Well-graded Gravel with Clay (and Sand)                                                                                                                                                                          |
|                                                                              |                               | GP           | Poorly graded Gravel (with Sand)                                                                                                                                                                                 |
|                                                                              |                               | GP-GM        | Poorly graded Gravel with Silt (and Sand)                                                                                                                                                                        |
|                                                                              |                               | GP-GC        | Poorly graded Gravel with Clay (and Sand)                                                                                                                                                                        |
|                                                                              |                               | GM           | Silty Gravel (with Sand)                                                                                                                                                                                         |
|                                                                              |                               | GC           | Clayey Gravel (with Sand)                                                                                                                                                                                        |
|                                                                              | Sand<br>(% sand ≥ % gravel)   | SW           | Well-graded Sand (with Gravel)                                                                                                                                                                                   |
|                                                                              |                               | SW-SM        | Well-graded Sand with Silt (and Gravel)                                                                                                                                                                          |
|                                                                              |                               | SW-SC        | Well-graded Sand with Clay (and Gravel)                                                                                                                                                                          |
|                                                                              |                               | SP           | Poorly graded Sand (with Gravel)                                                                                                                                                                                 |
|                                                                              |                               | SP-SM        | Poorly graded Sand with Silt (and Gravel)                                                                                                                                                                        |
|                                                                              |                               | SP-SC        | Poorly graded Sand with Clay (and Gravel)                                                                                                                                                                        |
|                                                                              |                               | SM           | Silty Sand (with Gravel)                                                                                                                                                                                         |
|                                                                              |                               | SC           | Clayey Sand (with Gravel)                                                                                                                                                                                        |
| Fine-Grained Soils<br>(50 percent or more passing the No. 200 sieve)         | Silt or Clay<br>LL < 50       | ML           | Silt (with Sand or Gravel), Sandy Silt (with Gravel), Gravelly Silt (with Sand)                                                                                                                                  |
|                                                                              |                               | CL-ML        | Silty Clay (with Sand or Gravel), Sandy Silty Clay (with Gravel), Gravelly Silty Clay (with Sand)                                                                                                                |
|                                                                              |                               | CL           | Lean Clay (with Sand or Gravel), Sandy lean Clay (with Gravel), Gravelly lean Clay (with Sand)                                                                                                                   |
|                                                                              |                               | OL           | Organic Clay (with Sand or Gravel), Sandy organic Clay (with Gravel), Gravelly organic Clay (with Sand), organic Silt (with Sand or Gravel), Sandy organic Silt (with Gravel), Gravelly organic Silt (with Sand) |
|                                                                              | Silt or Clay<br>LL ≥ 50       | MH           | Elastic Silt (with Sand or Gravel), Sandy elastic Silt (with Gravel), Gravelly elastic Silt (with Sand)                                                                                                          |
|                                                                              |                               | CH           | Fat Clay (with Sand or Gravel), Sandy fat Clay (with Gravel), Gravelly fat Clay (with Sand)                                                                                                                      |
|                                                                              |                               | OH           | Organic Clay (with Sand or Gravel), Sandy organic Clay (with Gravel), Gravelly organic Clay (with Sand), organic Silt (with Sand or Gravel), Sandy organic Silt (with Gravel), Gravelly organic Silt (with Sand) |
| Highly Organic Soils                                                         |                               | PT           | Peat and other highly organic soils                                                                                                                                                                              |

**Note:** Percentages are by dry weight. Soil classifications based on some criteria that are not shown. Group Name items in parentheses may or may not apply, depending on percent of sand or gravel.

| Coarse Grained Soil Definitions        |                                                          |
|----------------------------------------|----------------------------------------------------------|
| Fraction                               | Particle Dimension or U.S. Standard Sieve Size/No.       |
| Boulders                               | Above 12"                                                |
| Cobbles                                | 12" to 3"                                                |
| Gravel<br>- coarse<br>- fine           | 3" to 3/4"<br>3/4" to No. 4                              |
| Sand<br>- coarse<br>- medium<br>- fine | No. 4 to No. 10<br>No. 10 to No. 40<br>No. 40 to No. 200 |

|                                                                                     |                                                                 |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------|
|  | Split-barrel, 3-inch O.D., 2.43-inch I.D.                       |
|  | Split-barrel, 2.5-inch O.D., 1.93-inch I.D.                     |
|  | Standard Penetration Test (SPT), 2.0-inch O.D., 1.375-inch I.D. |
|  | Shelby Tube                                                     |
|  | Disturbed sample                                                |
|  | No recovery                                                     |
|  | Groundwater level during drilling                               |
|  | Subsequent groundwater level                                    |

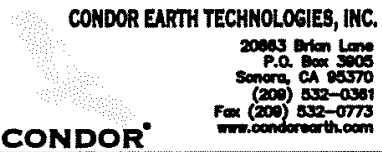
**Note:** O.D. = outside diameter I.D. = inside diameter



CONDOR EARTH TECHNOLOGIES, INC.

### LOG LEGEND AND SOIL CLASSIFICATION

ORIGINAL

|                                                       |           |                                                          |                                         |                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            |              |      |
|-------------------------------------------------------|-----------|----------------------------------------------------------|-----------------------------------------|-------------------------------------------------------------------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------|------------|---------------|------------|--------------|------|
| LOG OF BOREHOLE NO. <span>B-1</span>                  |           | PROJECT NUMBER: 6658                                     |                                         |  |                          |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            |              |      |
| PAGE 1 of 1                                           |           | PROJECT NAME: Culinary Institute of America at Greystone |                                         |                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            |              |      |
|                                                       |           | LOCATION: 2555 Main Street<br>St. Helena, CA             |                                         |                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            |              |      |
| COORDINATES: 38.514744, -122.485368                   |           |                                                          |                                         |                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            |              |      |
| REFERENCE POINT FOR DEPTH MEASUREMENT: Ground surface |           |                                                          |                                         |                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            |              |      |
| SURFACE CONDITION: Asphalt paved driveway             |           |                                                          | ELEVATION OF PIEZOMETER COLLAR: 301 Ft. |                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            |              |      |
| DIRECTION OF BOREHOLE: Vertical                       |           |                                                          | INCLINATION FROM HORIZONTAL: 90°        |                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            |              |      |
| TOTAL DEPTH: 39.9 ft.                                 |           |                                                          | DATE STARTED: 12/29/15                  |                                                                                     | DATE COMPLETED: 12/29/15 |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            |              |      |
| CONTRACTOR: Taber Drilling                            |           |                                                          |                                         |                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            |              |      |
| DRILL RIG: CME-55 Track Mounted                       |           |                                                          | DRILLER: Andrew Elbon                   |                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            |              |      |
| LOGGED BY: E. Kentta                                  |           |                                                          | DRAWN: EKK                              |                                                                                     | APPROVED:                |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            |              |      |
| NUMBER OF CORE BOXES: 7                               |           |                                                          | STORED: Condor Earth Technologies, Inc. |                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            |              |      |
| REMARKS                                               |           | Backfilled full depth with neat cement                   |                                         |                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            |              |      |
|                                                       |           |                                                          |                                         |                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            |              |      |
|                                                       |           |                                                          |                                         |                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            |              |      |
| DEPTH                                                 | ELEVATION | DATE                                                     | TECHNICAL LOG/NOTES                     | NOTE ON GROUNDWATER AND CIRCULATION                                                 | GRAPHIC LOG              | DESCRIPTION                                                                                                                                                                                                                                                                                                                                | WEATHERING | FRACTURE LOG | R. Q. D. % | CORE RECOVERY | END OF RUN | REMARKS/TIME |      |
| 5                                                     | 296       |                                                          |                                         |                                                                                     |                          | 0-0.3' ASPHALT                                                                                                                                                                                                                                                                                                                             |            |              |            |               |            | AUGER        | 1030 |
| 10                                                    | 291       |                                                          |                                         | 70% Return                                                                          |                          | 0.3'-39.9' VOLCANOCLASTIC ALLUVIUM - red-brown to dark brown dense CLAYEY SAND (SC) matrix with gravel to cobble-sized clasts, occasional boulders, poorly consolidated, matrix supported; clasts are mostly volcanic origin, fresh to slightly weathered sub-rounded to sub-angular, moderately strong to strong, moderately hard to hard |            |              |            |               |            | 3.8' PQ CORE | 1045 |
| 15                                                    | 286       |                                                          |                                         |                                                                                     |                          | 12': LL=41, PI=12, W=28.9%, $\gamma_d$ =87 pcf                                                                                                                                                                                                                                                                                             |            |              |            |               |            | 7.4'         | 1057 |
| 20                                                    | 281       |                                                          |                                         |                                                                                     |                          | 13': W=31.9%, $\gamma_d$ =81 pcf, $C'$ =470 pcf, $\phi'$ =33°                                                                                                                                                                                                                                                                              |            |              |            |               |            | 12.4'        | 1117 |
| 25                                                    | 276       |                                                          |                                         |                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            | 17.4'        | 1227 |
| 30                                                    | 271       |                                                          |                                         |                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            | 22.4'        | 1240 |
| 35                                                    | 266       |                                                          |                                         |                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            | 24.9'        | 1252 |
| 40                                                    | 261       |                                                          |                                         |                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            | 26.4'        | 1307 |
| 45                                                    |           |                                                          |                                         |                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            | 29.9'        | 1315 |
|                                                       |           |                                                          |                                         |                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            | 32.4'        | 1330 |
|                                                       |           |                                                          |                                         |                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            | 37.4'        | 1335 |
|                                                       |           |                                                          |                                         |                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            | 39.9'        | 1340 |
|                                                       |           |                                                          |                                         |                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            |              | 1344 |
|                                                       |           |                                                          |                                         |                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            |              | 1357 |
|                                                       |           |                                                          |                                         |                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            |              | 1401 |
|                                                       |           |                                                          |                                         |                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            |              | 1412 |
|                                                       |           |                                                          |                                         |                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            |              | 1415 |
|                                                       |           |                                                          |                                         |                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            |              | 1427 |
|                                                       |           |                                                          |                                         |                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            |              | 1432 |
|                                                       |           |                                                          |                                         |                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                            |            |              |            |               |            |              | 1442 |
|                                                       |           |                                                          |                                         |                                                                                     |                          | Terminated at 39.9'                                                                                                                                                                                                                                                                                                                        |            |              |            |               |            |              |      |

ORIGINAL

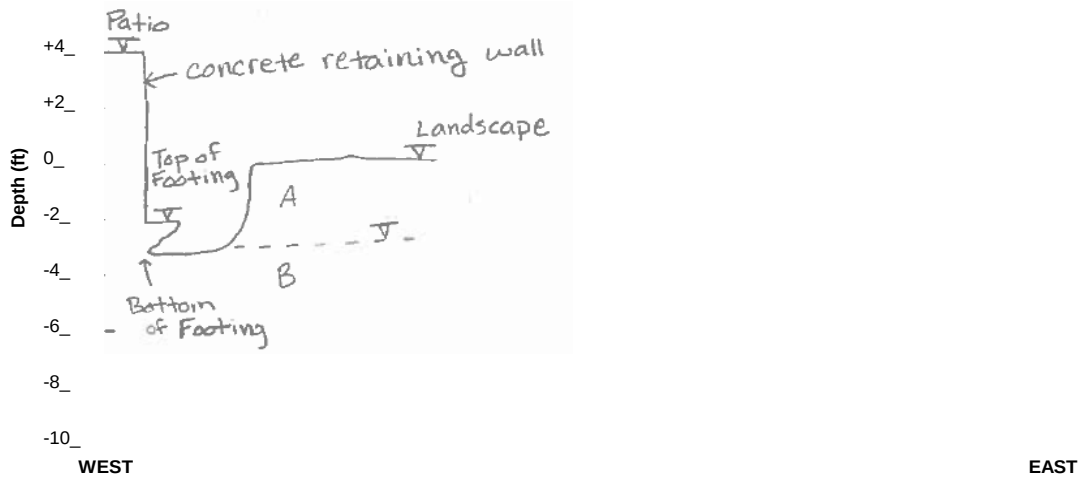
|                                                       |           |                                                          |                                                    |                                                                                                                      |             |                                                                 |            |              |            |               |            |              |
|-------------------------------------------------------|-----------|----------------------------------------------------------|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-------------|-----------------------------------------------------------------|------------|--------------|------------|---------------|------------|--------------|
| LOG OF BOREHOLE NO. <span>B-2</span>                  |           | PROJECT NUMBER: 6658                                     |                                                    | CONDOR EARTH TECHNOLOGIES, INC.                                                                                      |             |                                                                 |            |              |            |               |            |              |
| PAGE 1 of 1                                           |           | PROJECT NAME: Culinary Institute of America at Greystone |                                                    | 20863 Brian Lane<br>P.O. Box 3805<br>Sonoma, CA 95370<br>(209) 632-0381<br>Fax (209) 632-0773<br>www.condorearth.com |             |                                                                 |            |              |            |               |            |              |
| LOCATION: 2555 Main Street<br>St. Helena, CA          |           |                                                          |                                                    | CONDOR                                                                                                               |             |                                                                 |            |              |            |               |            |              |
| COORDINATES: 38.514391, -122.485005                   |           |                                                          |                                                    |                                                                                                                      |             |                                                                 |            |              |            |               |            |              |
| REFERENCE POINT FOR DEPTH MEASUREMENT: Ground surface |           |                                                          |                                                    |                                                                                                                      |             |                                                                 |            |              |            |               |            |              |
| SURFACE CONDITION: Concrete paved driveway            |           |                                                          | ELEVATION OF PIEZOMETER COLLAR: 302 ft.            |                                                                                                                      |             |                                                                 |            |              |            |               |            |              |
| DIRECTION OF BOREHOLE: Vertical                       |           |                                                          | INCLINATION FROM HORIZONTAL: 90°                   |                                                                                                                      |             |                                                                 |            |              |            |               |            |              |
| TOTAL DEPTH: 39.9 ft                                  |           |                                                          | DATE STARTED: 12/30/15    DATE COMPLETED: 12/30/15 |                                                                                                                      |             |                                                                 |            |              |            |               |            |              |
| CONTRACTOR: Taber Drilling                            |           |                                                          |                                                    |                                                                                                                      |             |                                                                 |            |              |            |               |            |              |
| DRILL RIG: CME-55 Track Mounted                       |           |                                                          | DRILLER: Andrew Elbon                              |                                                                                                                      |             |                                                                 |            |              |            |               |            |              |
| LOGGED BY: E. Kentta                                  |           |                                                          | DRAWN: EKK                                         |                                                                                                                      | APPROVED:   |                                                                 |            |              |            |               |            |              |
| NUMBER OF CORE BOXES: 7                               |           |                                                          | STORED: Condor Earth Technologies, Inc.            |                                                                                                                      |             |                                                                 |            |              |            |               |            |              |
| REMARKS                                               |           | Backfilled full depth with neat cement                   |                                                    |                                                                                                                      |             |                                                                 |            |              |            |               |            |              |
|                                                       |           |                                                          |                                                    |                                                                                                                      |             |                                                                 |            |              |            |               |            |              |
|                                                       |           |                                                          |                                                    |                                                                                                                      |             |                                                                 |            |              |            |               |            |              |
| DEPTH                                                 | ELEVATION | DATE                                                     | TECHNICAL LOG/NOTES                                | NOTE ON GROUNDWATER AND CIRCULATION                                                                                  | GRAPHIC LOG | DESCRIPTION                                                     | WEATHERING | FRACTURE LOG | R. Q. D. % | CORE RECOVERY | END OF RUN | REMARKS/TIME |
|                                                       |           |                                                          |                                                    |                                                                                                                      |             |                                                                 |            |              |            |               |            |              |
| 5                                                     | 297       | 12/30/15                                                 |                                                    |                                                                                                                      |             | 0-0.75' REINFORCED CONCRETE                                     |            |              |            |               | PG CORE    | 0912         |
|                                                       |           |                                                          |                                                    |                                                                                                                      |             | 0.75'-39.9' VOLCANOCLASTIC ALLUVIUM -                           |            |              |            |               | AUGER      |              |
|                                                       |           |                                                          |                                                    |                                                                                                                      |             | red-brown to dark brown dense                                   |            |              |            |               | 5.0'       | 0926         |
|                                                       |           |                                                          |                                                    |                                                                                                                      |             | CLAYEY SAND (SC) matrix with                                    |            |              |            |               | PG CORE    | 0932         |
|                                                       |           |                                                          |                                                    |                                                                                                                      |             | gravel to cobble-sized clasts,                                  |            |              |            |               | 7.4'       | 0940         |
|                                                       |           |                                                          |                                                    |                                                                                                                      |             | occasional boulders, poorly                                     |            |              |            |               |            | 0945         |
|                                                       |           |                                                          |                                                    |                                                                                                                      |             | consolidated, matrix supported;                                 |            |              |            |               |            |              |
|                                                       |           |                                                          |                                                    |                                                                                                                      |             | clasts are mostly volcanic                                      |            |              |            |               |            |              |
|                                                       |           |                                                          |                                                    |                                                                                                                      |             | origin, fresh to slightly weathered,                            |            |              |            |               |            |              |
|                                                       |           |                                                          |                                                    |                                                                                                                      |             | sub-rounded to sub-angular,                                     |            |              |            |               |            |              |
|                                                       |           |                                                          |                                                    |                                                                                                                      |             | moderately strong to strong,                                    |            |              |            |               |            |              |
|                                                       |           |                                                          |                                                    |                                                                                                                      |             | moderately hard to hard                                         |            |              |            |               |            |              |
| 10                                                    | 292       |                                                          |                                                    | 100% Return                                                                                                          |             | 5': LL=49, PI=17                                                |            |              |            |               | 12.4'      | 1004         |
|                                                       |           |                                                          |                                                    |                                                                                                                      |             | 14': W=33.1%, $\gamma_d=85$ pcf                                 |            |              |            |               |            | 1011         |
|                                                       |           |                                                          |                                                    |                                                                                                                      |             | 19': W=22.9%, $\gamma_d=82$ pcf, $C'=160$ psf, $\phi'=31^\circ$ |            |              |            |               |            |              |
| 15                                                    | 287       |                                                          |                                                    |                                                                                                                      |             |                                                                 |            |              |            |               | 17.4'      | 1024         |
|                                                       |           |                                                          |                                                    |                                                                                                                      |             |                                                                 |            |              |            |               |            | 1030         |
| 20                                                    | 282       |                                                          | APPROXIMATE TUNNEL ZONE<br>± 274-286               |                                                                                                                      |             | 19.5' clayey GRAVEL with SAND (GC)                              |            |              |            |               | 22.4'      | 1049         |
|                                                       |           |                                                          |                                                    |                                                                                                                      |             | 19.5': F=32, LL=40, PI=11                                       |            |              |            |               |            | 1056         |
| 25                                                    | 277       |                                                          |                                                    |                                                                                                                      |             |                                                                 |            |              |            |               | 27.4'      | 1111         |
|                                                       |           |                                                          |                                                    |                                                                                                                      |             |                                                                 |            |              |            |               |            | 1120         |
| 30                                                    | 272       |                                                          | 20 min. Stop For mechanical repair on rig          |                                                                                                                      |             |                                                                 |            |              |            |               | 32.4'      | 1157         |
|                                                       |           |                                                          |                                                    |                                                                                                                      |             |                                                                 |            |              |            |               |            | 1202         |
| 35                                                    | 267       |                                                          |                                                    | 80% Return                                                                                                           |             |                                                                 |            |              |            |               | 37.4'      | 1215         |
|                                                       |           |                                                          |                                                    |                                                                                                                      |             |                                                                 |            |              |            |               |            | 1221         |
| 40                                                    | 262       |                                                          |                                                    |                                                                                                                      |             | Terminate at 39.9'                                              |            |              |            |               | 39.9'      | 1232         |
| 45                                                    |           |                                                          |                                                    |                                                                                                                      |             |                                                                 |            |              |            |               |            |              |

|                                                       |           |                                                                                      |                            |                                                                                                                                                                                 |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            |              |            |               |                                                                                                |                                                                                                                              |  |  |
|-------------------------------------------------------|-----------|--------------------------------------------------------------------------------------|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------|------------|---------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|--|--|
| LOG OF BOREHOLE NO. <div>B-3</div>                    |           | PROJECT NUMBER: 6658                                                                 |                            | <div>CONDOR EARTH TECHNOLOGIES, INC.</div> <div>20863 Brian Lane<br/>P.O. Box 3805<br/>Sonoma, CA 95370<br/>(209) 532-0361<br/>Fax (209) 532-0773<br/>www.condorearth.com</div> |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            |              |            |               |                                                                                                |                                                                                                                              |  |  |
| PAGE 1 of 1                                           |           | PROJECT NAME: Culinary Institute of America at Greystone                             |                            | <div>CONDOR</div>                                                                                                                                                               |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            |              |            |               |                                                                                                |                                                                                                                              |  |  |
|                                                       |           | LOCATION: 2555 Main Street<br>St. Helena, CA                                         |                            |                                                                                                                                                                                 |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            |              |            |               |                                                                                                |                                                                                                                              |  |  |
| COORDINATES: 38.515144° -122.485529°                  |           |                                                                                      |                            |                                                                                                                                                                                 |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            |              |            |               |                                                                                                |                                                                                                                              |  |  |
| REFERENCE POINT FOR DEPTH MEASUREMENT: Ground Surface |           |                                                                                      |                            |                                                                                                                                                                                 |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            |              |            |               |                                                                                                |                                                                                                                              |  |  |
| SURFACE CONDITION: Asphalt Driveway                   |           | ELEVATION OF PIEZOMETER COLLAR: 289 Ft.                                              |                            |                                                                                                                                                                                 |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            |              |            |               |                                                                                                |                                                                                                                              |  |  |
| DIRECTION OF BOREHOLE: Vertical                       |           | INCLINATION FROM HORIZONTAL: 90°                                                     |                            |                                                                                                                                                                                 |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            |              |            |               |                                                                                                |                                                                                                                              |  |  |
| TOTAL DEPTH: 27.1 Ft.                                 |           | DATE STARTED: 5/2/16                                                                 |                            | DATE COMPLETED: 5/2/16                                                                                                                                                          |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            |              |            |               |                                                                                                |                                                                                                                              |  |  |
| CONTRACTOR: Taber Drilling                            |           |                                                                                      |                            |                                                                                                                                                                                 |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            |              |            |               |                                                                                                |                                                                                                                              |  |  |
| DRILL RIG: CME-55 Track Mounted                       |           | DRILLER: Andy Elbon                                                                  |                            |                                                                                                                                                                                 |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            |              |            |               |                                                                                                |                                                                                                                              |  |  |
| LOGGED BY: E. Kentta                                  |           | DRAWN: E. Kentta                                                                     |                            | APPROVED:                                                                                                                                                                       |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            |              |            |               |                                                                                                |                                                                                                                              |  |  |
| NUMBER OF CORE BOXES: 5                               |           | STORED: Condor - Sonoma, CA                                                          |                            |                                                                                                                                                                                 |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            |              |            |               |                                                                                                |                                                                                                                              |  |  |
| REMARKS                                               |           | Backfilled full depth with neat cement grout<br>■ = 2.5-inch inside diameter sampler |                            |                                                                                                                                                                                 |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            |              |            |               |                                                                                                |                                                                                                                              |  |  |
| DEPTH                                                 | ELEVATION | DATE                                                                                 | TECHNICAL LOG/NOTES        | NOTE ON GROUNDWATER AND CIRCULATION                                                                                                                                             | GRAPHIC LOG | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | WEATHERING | FRACTURE LOG | R. Q. D. % | CORE RECOVERY | END OF RUN                                                                                     | REMARKS/TIME                                                                                                                 |  |  |
| 5                                                     | 284       | 5/2/16                                                                               | APPROXIMATE<br>TUNNEL ZONE | ~90%<br>RETURN                                                                                                                                                                  |             | 4" Asphalt<br>0.5'-6' ARTIFICIAL FILL - SANDY CLAY (CL)<br>with GRAVEL and rock blocks; brown<br>stiff, fine to coarse sand, fine to<br>coarse subangular gravel, subangular,<br>hard rock blocks ① ②<br>6'-27.1' SONOMA VOLCANICS - VOLCANICLASTIC<br>ALLUVIUM: CLAYEY SAND (SC) matrix,<br>red-brown, dense, fine to coarse<br>sand, with fine to coarse gravel<br>and cobble-sized clasts, matrix<br>supported; clasts are mostly<br>volcanic origin, fresh to<br>moderately weathered, subangular,<br>strong, hard, vesicular ③<br>9.5'-27.1' yellow/dark brown matrix<br><br>① 2.5': W=12.7, $\gamma_d$ =113<br>② 5': LL=38, PI=14<br>③ 8.5': LL=59, PI=20 |            |              |            |               | AUGER<br>2.5'<br>Blows<br>4.0'<br>AUGER 5.0'<br>PQ<br>7.1'<br>12.1'<br>17.1'<br>22.1'<br>27.1' | 0844<br>0858<br>0900<br>0905<br>0918<br>0913<br>0924<br>0940<br>0947<br>1003<br>1008<br>1027<br>1033<br>1055<br>1059<br>1124 |  |  |
| 10                                                    | 279       |                                                                                      |                            |                                                                                                                                                                                 |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            |              |            |               |                                                                                                |                                                                                                                              |  |  |
| 15                                                    | 274       |                                                                                      |                            |                                                                                                                                                                                 |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            |              |            |               |                                                                                                |                                                                                                                              |  |  |
| 20                                                    | 269       |                                                                                      |                            |                                                                                                                                                                                 |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            |              |            |               |                                                                                                |                                                                                                                              |  |  |
| 25                                                    | 264       |                                                                                      |                            |                                                                                                                                                                                 |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            |              |            |               |                                                                                                |                                                                                                                              |  |  |
| 30                                                    | 259       |                                                                                      |                            |                                                                                                                                                                                 |             | Terminated at 27.1 ft.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            |              |            |               |                                                                                                |                                                                                                                              |  |  |

CONDOR EARTH TECHNOLOGIES, INC.  
LOG OF TEST PIT - 1



**Project:** Culinary Institute of America at Greystone  
2555 Main Street  
St. Helena, CA  
**Location:** See Figure 2  
**Approx. Elev. (ft):**  
**Approx. Depth (ft):** 3  
**Approx. Length (ft):** 5.5  
**Project No.:** 6658  
**Logged By:** A. Kositsky  
**Orientation:** N 10 ° W  
**Date:** 4/18/16  
**Equipment:** shovel, slide hammer



| Layer | Description                                                                                                                                                                                                                        |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A     | <b>ARTIFICIAL FILL - CLAY with SAND (CL):</b> dark brown, moist to wet, stiff, fine sand, moderate plasticity<br>2 ft: LL=37, PI=20, w=20.3, $\gamma_d$ =90, $c'$ =170, $\phi'$ =24.1                                              |
| B     | <b>SONOMA VOLCANICS - VOLCANICLASTIC ALLUVIUM:</b> severely weathered to consistency of CLAY<br>WITH SAND (CL), yellow-brown, moist, very stiff, fine sand<br>3 ft: LL=34, PI=16, w=33.3, $\gamma_d$ =87, $c'$ =200, $\phi'$ =23.7 |
|       |                                                                                                                                                                                                                                    |

**GROUNDWATER:** not encountered at time of excavation  
**SAMPLE:** Two 2-inch diameter tubes at 3 ft., one 2-inch diameter tube at 2 ft., disturbed (bag) sample at 2 ft.  
**NOTES:**

**LEGEND:**  
PP = Pocket Penetrometer Resistance - Unconfined Compressive Strength (tons per square foot)  
F = Percent Passing No. 200 Sieve by Dry Weight, LL = Liquid Limit, PI = Plasticity Index  
w = Moisture Content (percent),  $\gamma_d$  = Dry Unit Weight (pounds per cubic foot)  
 $q_u$  = Unconfined Compressive Strength - Laboratory (pounds per square foot)  
 $S_u$  = Undrained Shear Strength (pounds per square foot)  
Drained Shear Strength Parameters:  $c'$  = Cohesion (pounds per square foot),  $\phi'$  = Internal Friction Angle (deg)

CONDOR EARTH TECHNOLOGIES, INC.  
LOG OF TEST PIT - 2



**Project:** Culinary Institute of America at Greystone  
2555 Main Street  
St. Helena, CA

**Location:** See Figure 2

**Project No.:** 6658

**Logged By:** A. Kositsky

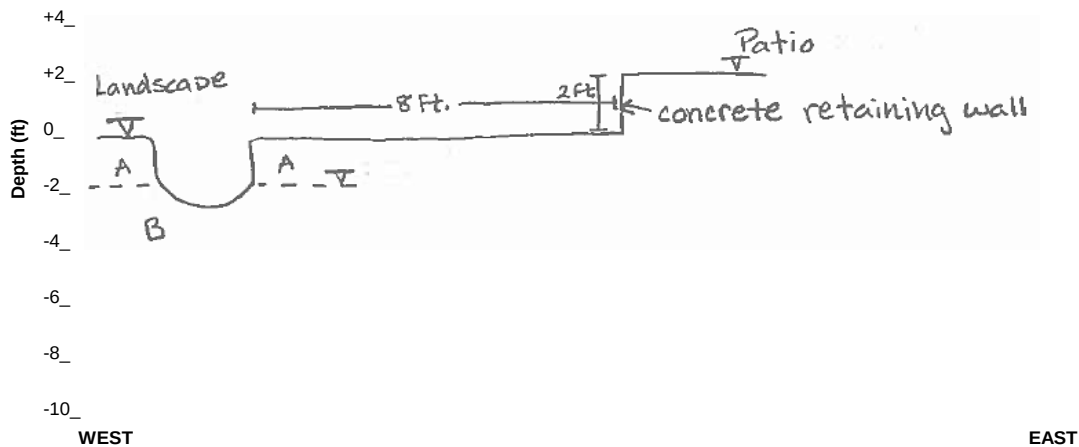
**Date:** 4/18/16

**Approx. Elev. (ft):**

**Approx. Depth (ft):** 2.5

**Approx. Length (ft):** 3

**Equipment:** shovel



| Layer | Description                                                                                                                                                                                                                |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A     | <b>ARTIFICIAL FILL - SANDY CLAY WITH GRAVEL ROCK BLOCKS (CL):</b> red-brown and brown, dry, stiff, fine to coarse sand, fine to coarse and subangular gravel, subangular to subrounded rock blocks up to 18 inches in size |
| B     | <b>SONOMA VOLCANICS - VOLCANICLASTIC ALLUVIUM:</b> severely weathered to consistency of SANDY CLAY (CL), yellow-brown, dry, very stiff, fine sand                                                                          |
|       |                                                                                                                                                                                                                            |

**GROUNDWATER:** not encountered at time of excavation

**SAMPLE:** not sampled

**NOTES:**

**LEGEND:**

PP = Pocket Penetrometer Resistance - Unconfined Compressive Strength (tons per square foot)

F = Percent Passing No. 200 Sieve by Dry Weight, LL = Liquid Limit, PI = Plasticity Index

w = Moisture Content (percent),  $\gamma_d$  = Dry Unit Weight (pounds per cubic foot)

$q_u$  = Unconfined Compressive Strength - Laboratory (pounds per square foot)

$S_u$  = Undrained Shear Strength (pounds per square foot)

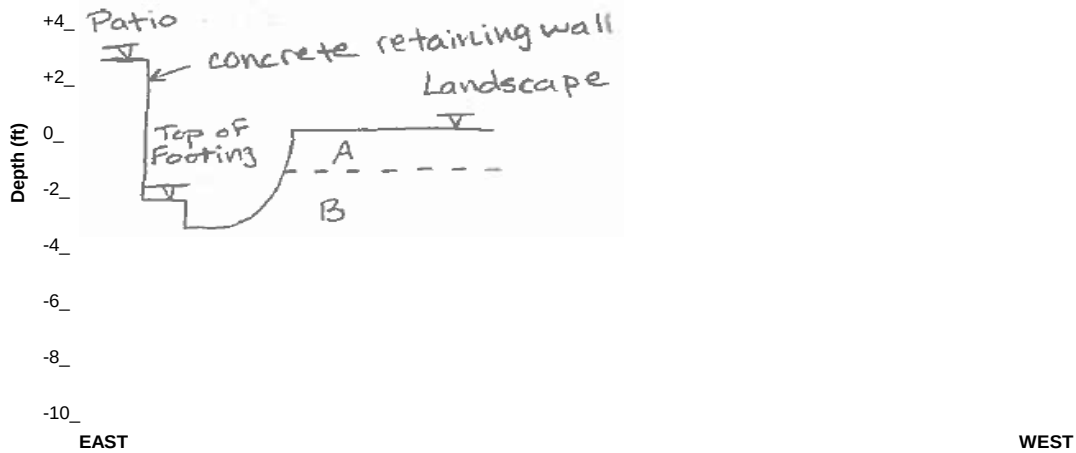
Drained Shear Strength Parameters:  $c'$  = Cohesion (pounds per square foot),  $\phi'$  = Internal Friction Angle (deg)

CONDOR EARTH TECHNOLOGIES, INC.  
LOG OF TEST PIT - 3



**Project:** Culinary Institute of America at Greystone  
2555 Main Street  
St. Helena, CA  
**Location:** See Figure 2

**Project No.:** 6658  
**Approx. Elev. (ft):** 3  
**Approx. Depth (ft):** 3  
**Logged By:** A. Kositsky  
**Approx. Length (ft):** 2  
**Date:** 4/18/16  
**Equipment:** shovel



| Layer | Description                                                                                                                                                                                   |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A     | ARTIFICIAL FILL - CLAY (CL): dark brown, wet, very stiff                                                                                                                                      |
| B     | ARTIFICIAL FILL - Poorly-Graded SAND with CLAY and GRAVEL (SP-SC): brown, moist, dense, fine to coarse sand, coarse and subangular gravel consisting of hard rock<br>3ft: F=5.8, LL=28, PI=11 |
|       |                                                                                                                                                                                               |

**GROUNDWATER:** not encountered at time of excavation

**SAMPLE:** disturbed (bag) sample at 3 ft.

**NOTES:**

**LEGEND:**

PP = Pocket Penetrometer Resistance - Unconfined Compressive Strength (tons per square foot)  
F = Percent Passing No. 200 Sieve by Dry Weight, LL = Liquid Limit, PI = Plasticity Index  
w = Moisture Content (percent),  $\gamma_d$  = Dry Unit Weight (pounds per cubic foot)  
 $q_u$  = Unconfined Compressive Strength - Laboratory (pounds per square foot)  
 $S_u$  = Undrained Shear Strength (pounds per square foot)  
Drained Shear Strength Parameters:  $c'$  = Cohesion (pounds per square foot),  $\phi'$  = Internal Friction Angle (deg)



# CONDOR EARTH TECHNOLOGIES, INC.

## LOG OF TEST PIT - 4



**Project:** Culinary Institute of America at Greystone  
 2555 Main Street  
 St. Helena, CA

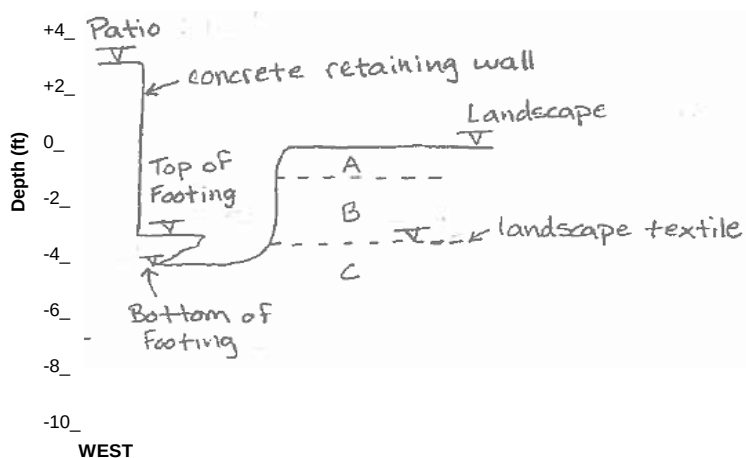
**Location:** See Figure 2

**Project No.:** 6658

**Logged By:** E. Kentta

**Date:** 5/2/16

**Approx. Elev. (ft):** 3.9  
**Approx. Depth (ft):** 3.9  
**Approx. Length (ft):** 4.4' x 2.4'  
**Orientation:** N 20° W  
**Equipment:** shovel



| Layer | Description                                                                                                                                                                                                      |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A     | <b>ARTIFICIAL FILL - SANDY CLAY (CL) with GRAVEL:</b> red-brown to brown, dry to moist, stiff, fine to coarse sand, subangular to subrounded gravel consisting of hard rock, roots                               |
| B     | <b>ARTIFICIAL FILL - Well-Graded SAND with GRAVEL (SW):</b> tan, moist, medium dense, fine to medium sand, minor coarse sand and subangular fine gravel, roots                                                   |
| C     | <b>SONOMA VOLCANICS - VOLCANICLASTIC ALLUVIUM:</b> severely weathered to consistency of SANDY CLAY (CL), light brown, moist, stiff, fine to coarse sand, subangular to subrounded gravel consisting of hard rock |
|       |                                                                                                                                                                                                                  |

**GROUNDWATER:** not encountered at time of excavation

**SAMPLE:** not sampled

**NOTES:**

### LEGEND:

PP = Pocket Penetrometer Resistance - Unconfined Compressive Strength (tons per square foot)

F = Percent Passing No. 200 Sieve by Dry Weight, LL = Liquid Limit, PI = Plasticity Index

w = Moisture Content (percent),  $\gamma_d$  = Dry Unit Weight (pounds per cubic foot)

$q_u$  = Unconfined Compressive Strength - Laboratory (pounds per square foot)

$S_u$  = Undrained Shear Strength (pounds per square foot)

Drained Shear Strength Parameters:  $c'$  = Cohesion (pounds per square foot),  $\phi'$  = Internal Friction Angle (deg)

## 6658 CIA Core Box Photos



IMG\_3933.JPG



IMG\_3934.JPG

## 6658 CIA Core Box Photos



IMG\_3935.JPG



IMG\_3936.JPG



## 6658 CIA Core Box Photos



IMG\_3937.JPG



IMG\_3938.JPG

## 6658 CIA Core Box Photos

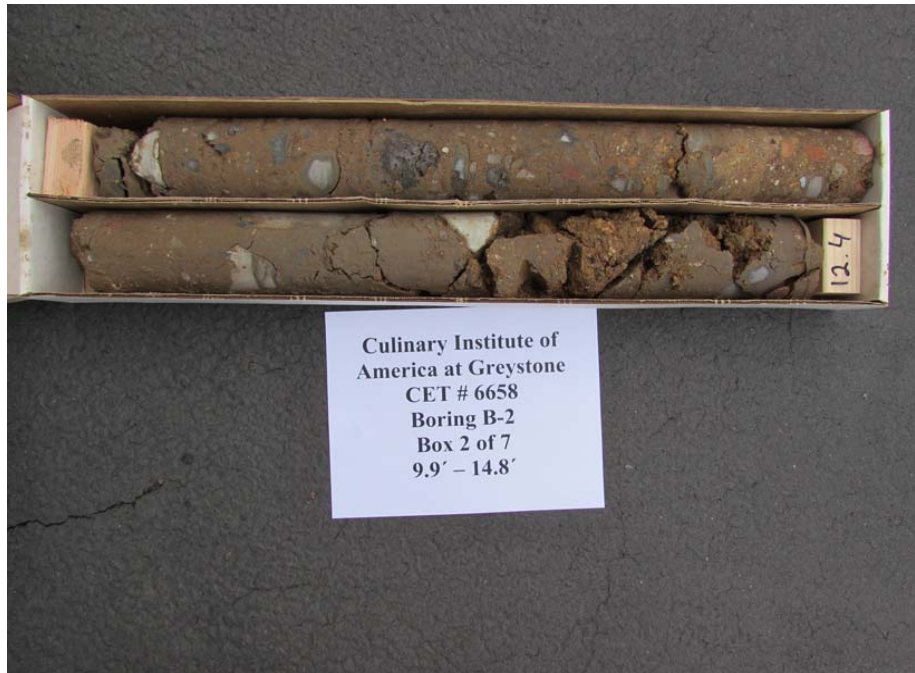


IMG\_3939.JPG



IMG\_3940.JPG

## 6658 CIA Core Box Photos



IMG\_3941.JPG



IMG\_3942.JPG



## 6658 CIA Core Box Photos



IMG\_3943.JPG



IMG\_3944.JPG

## 6658 CIA Core Box Photos



IMG\_3945.JPG



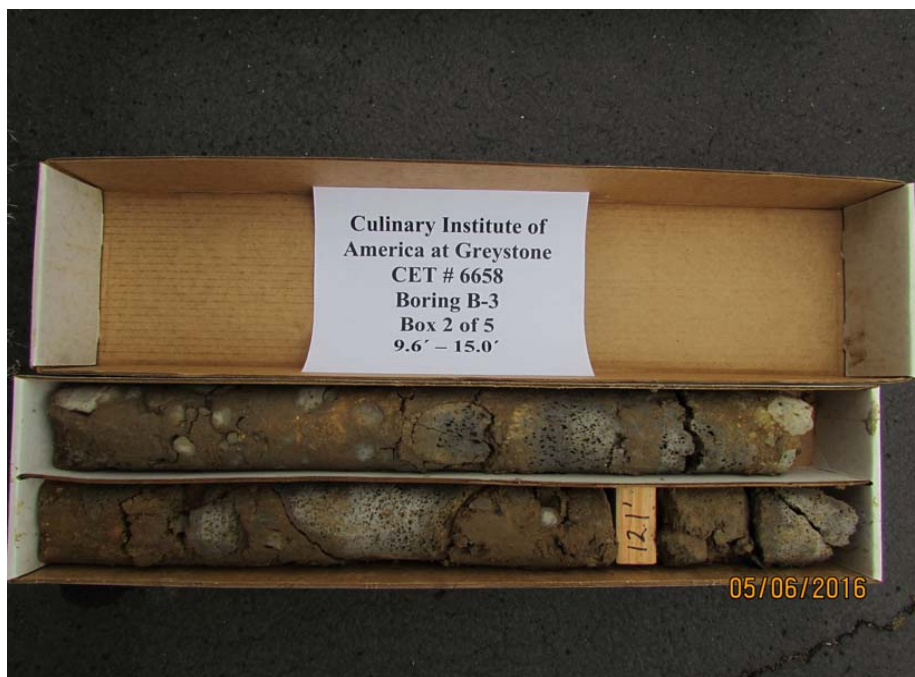
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## 6658 CIA Core Box Photos



IMG\_4701.JPG

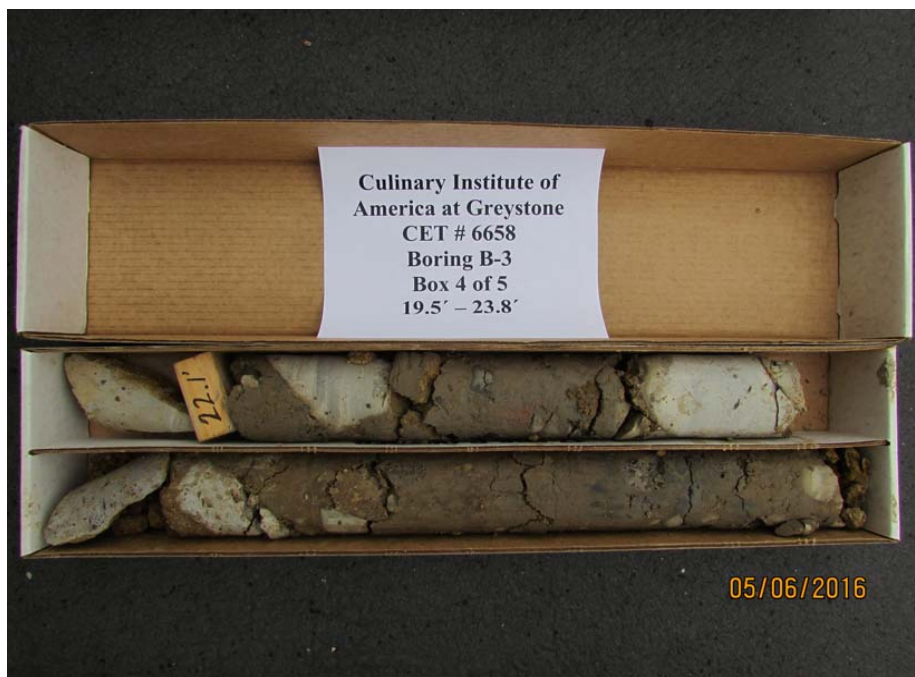


IMG\_4702.JPG

## 6658 CIA Core Box Photos



IMG\_4703.JPG



IMG\_4704.JPG

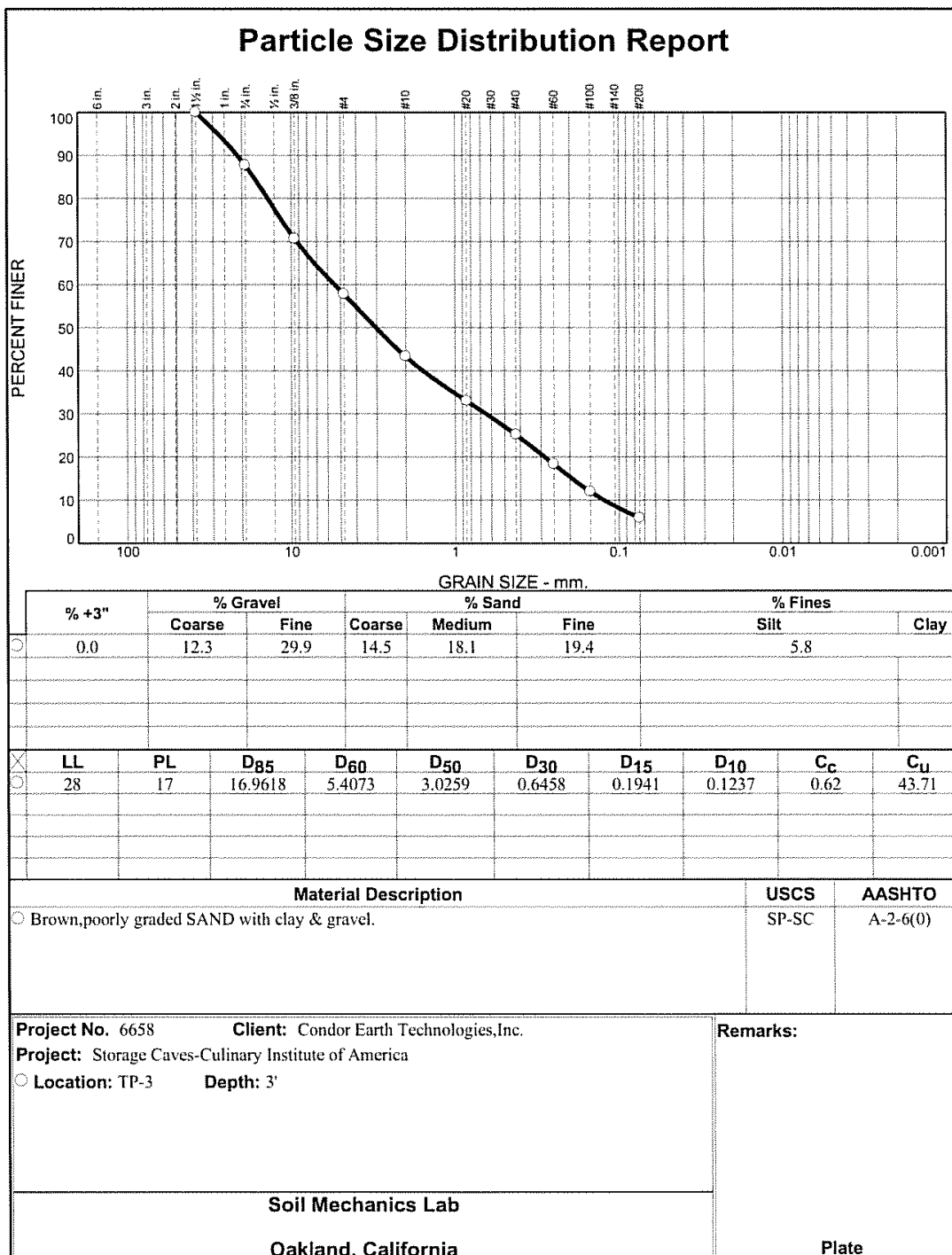
## 6658 CIA Core Box Photos



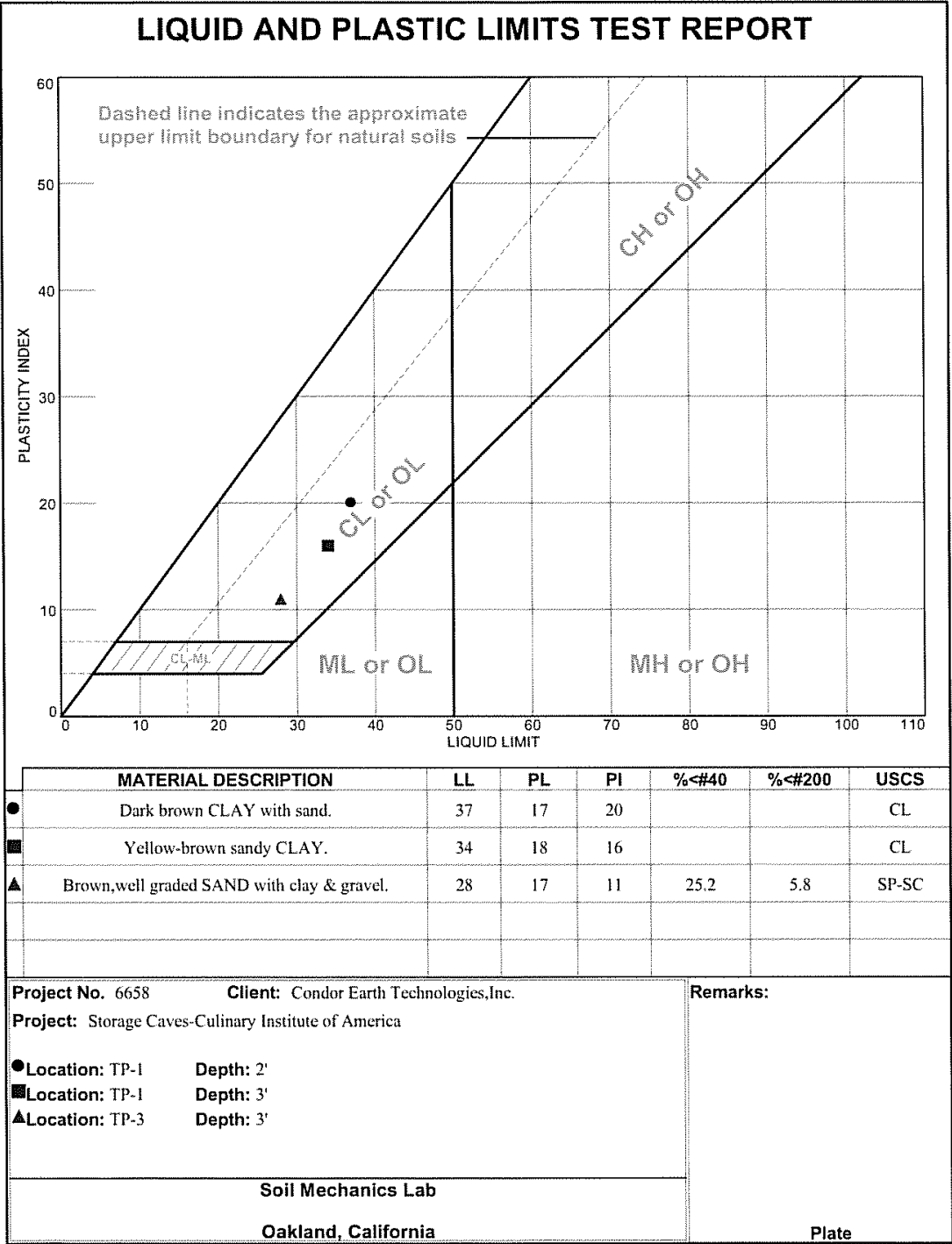
IMG\_4705.JPG

**APPENDIX B**  
**Laboratory Test Reports**







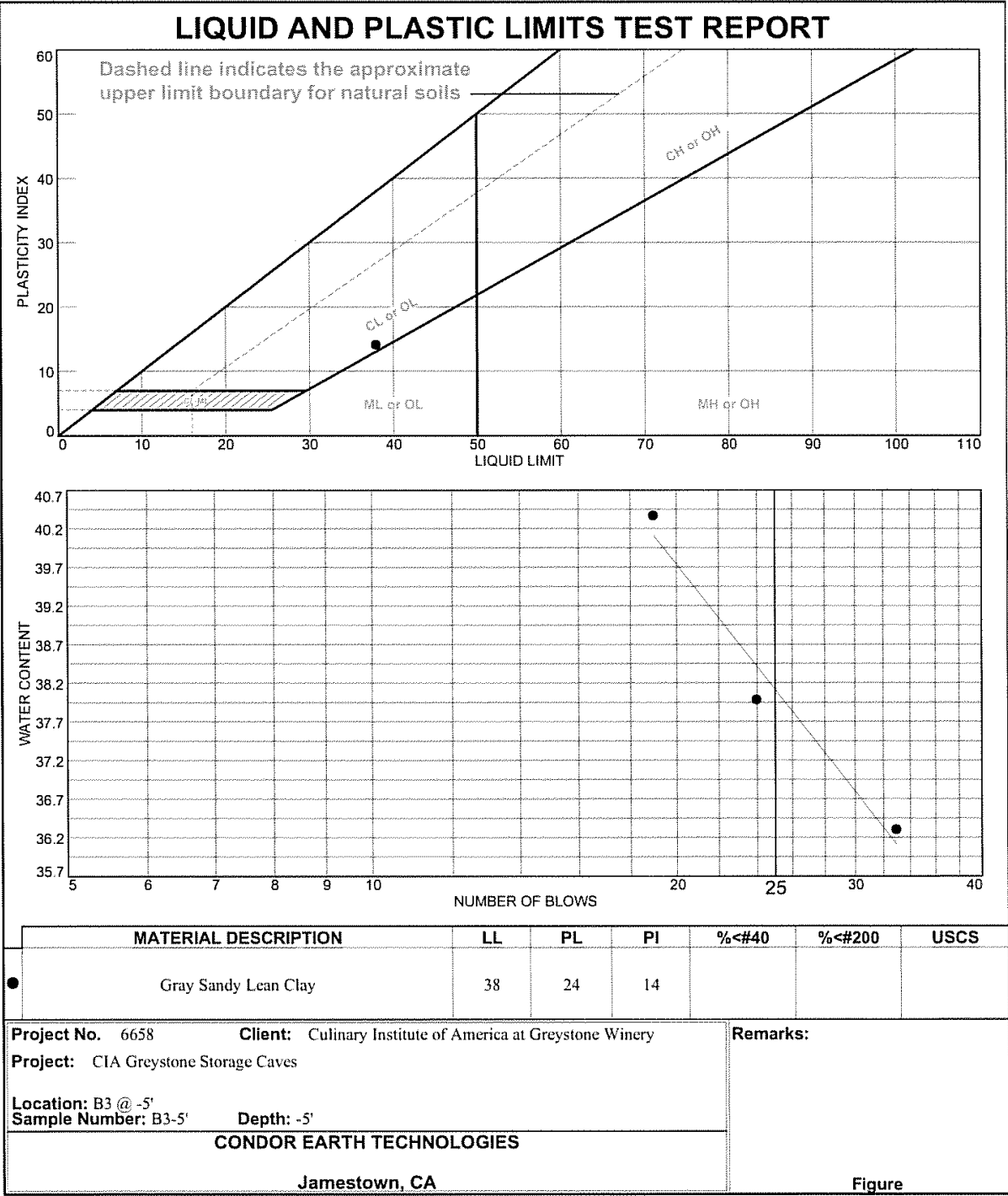


Tested By: MA                      Checked By: \_\_\_\_\_

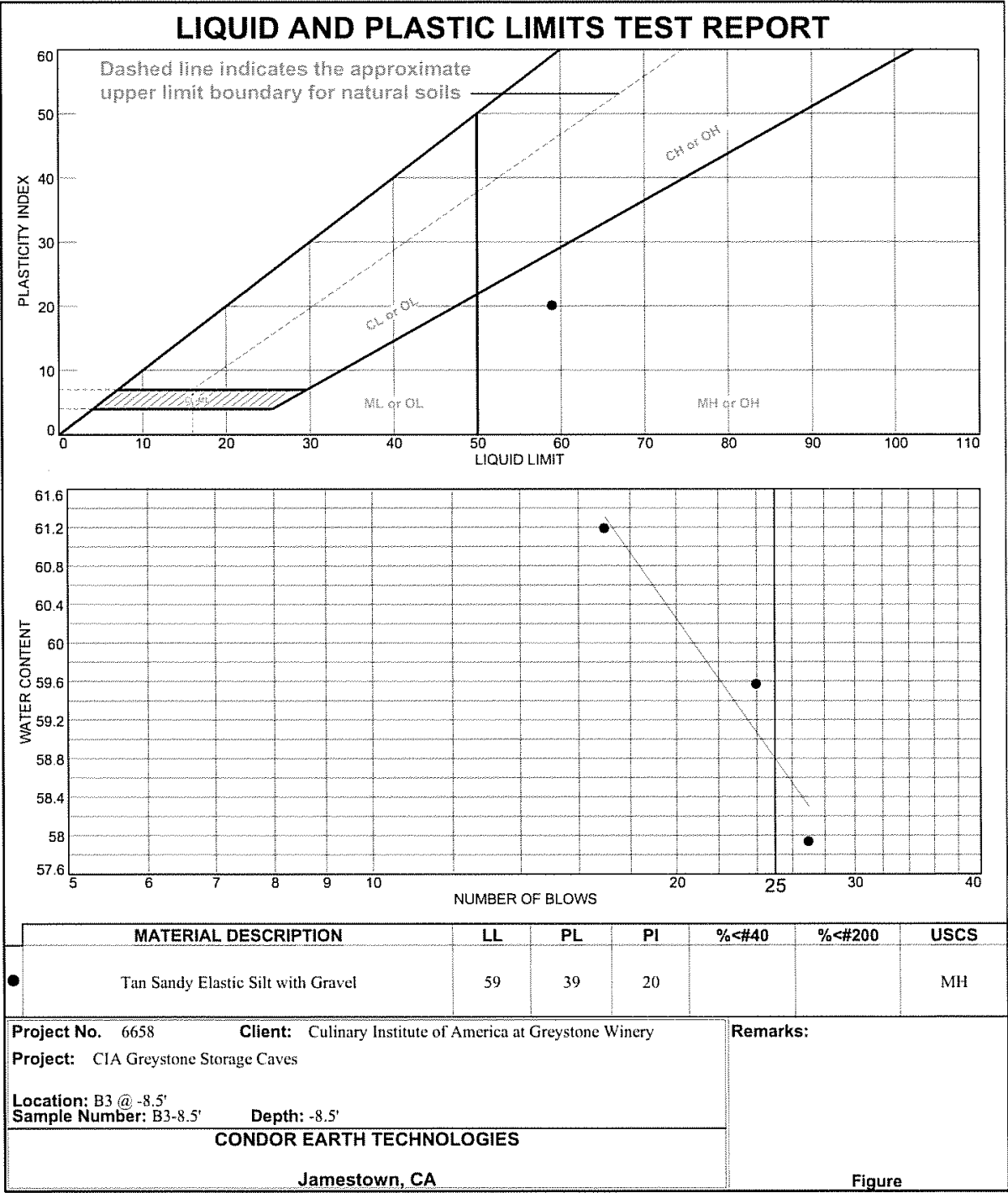




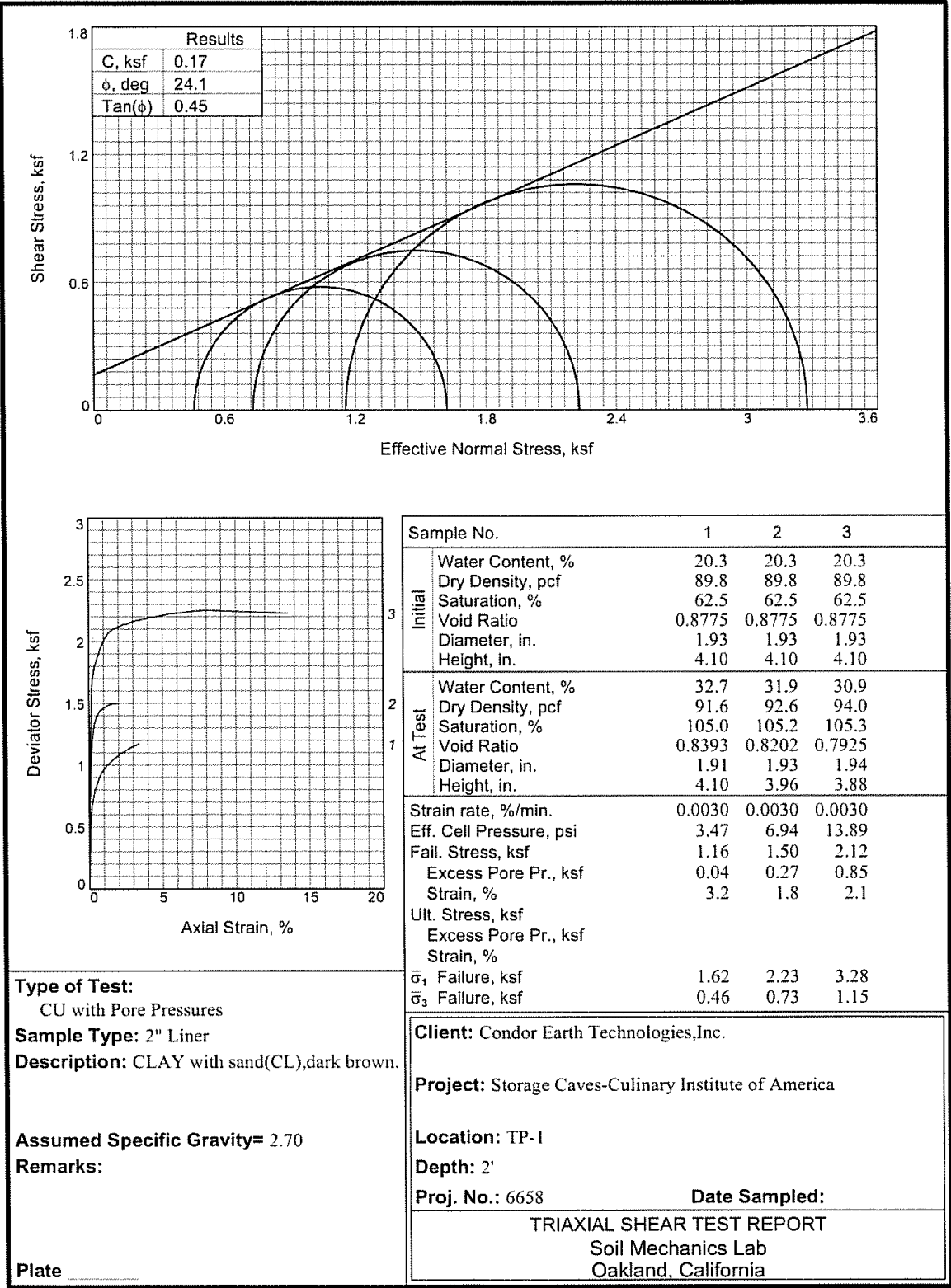


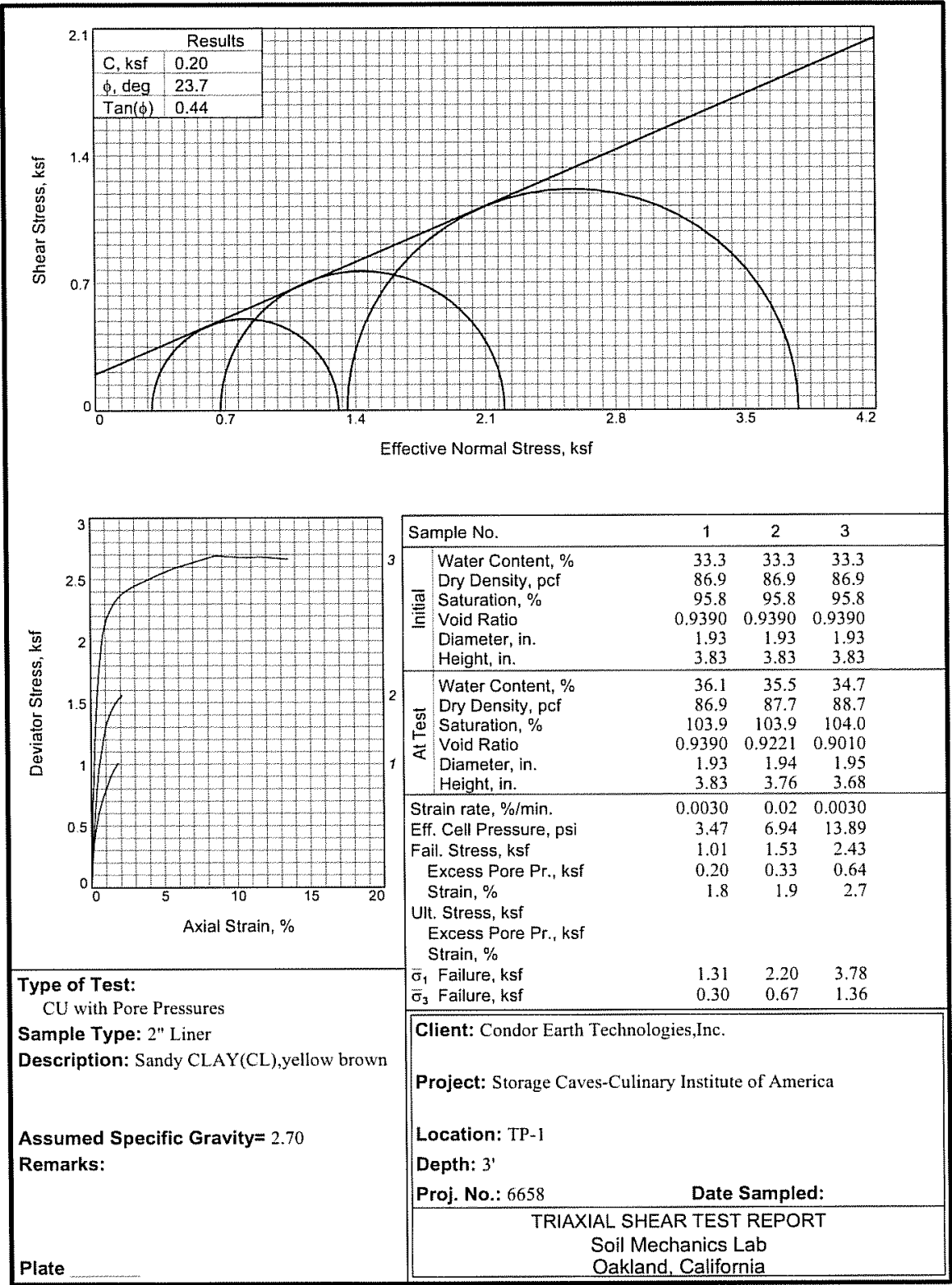


Tested By: N. Garnica      Checked By: R. Long

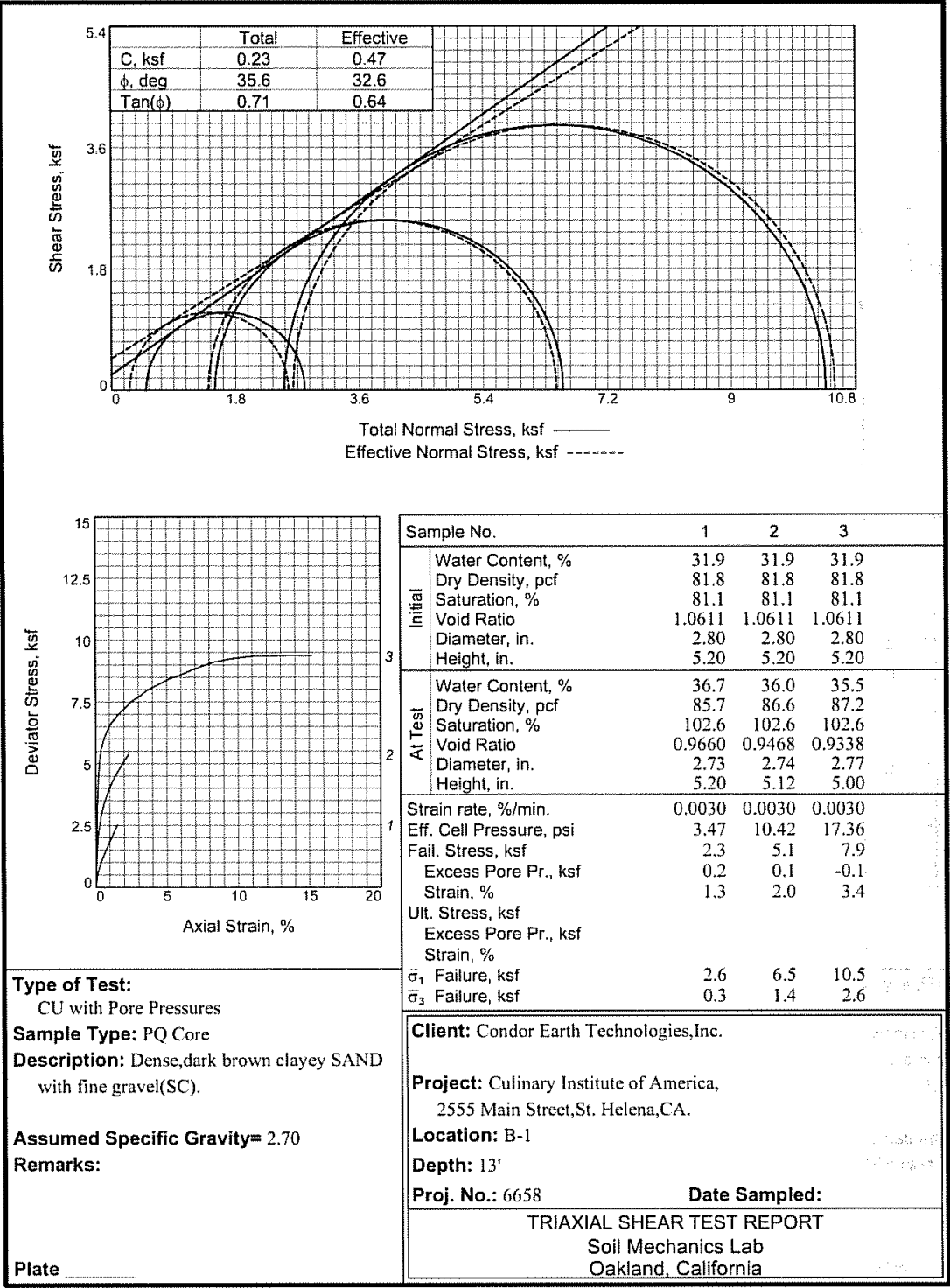


Tested By: N. Garnica      Checked By: R. Long

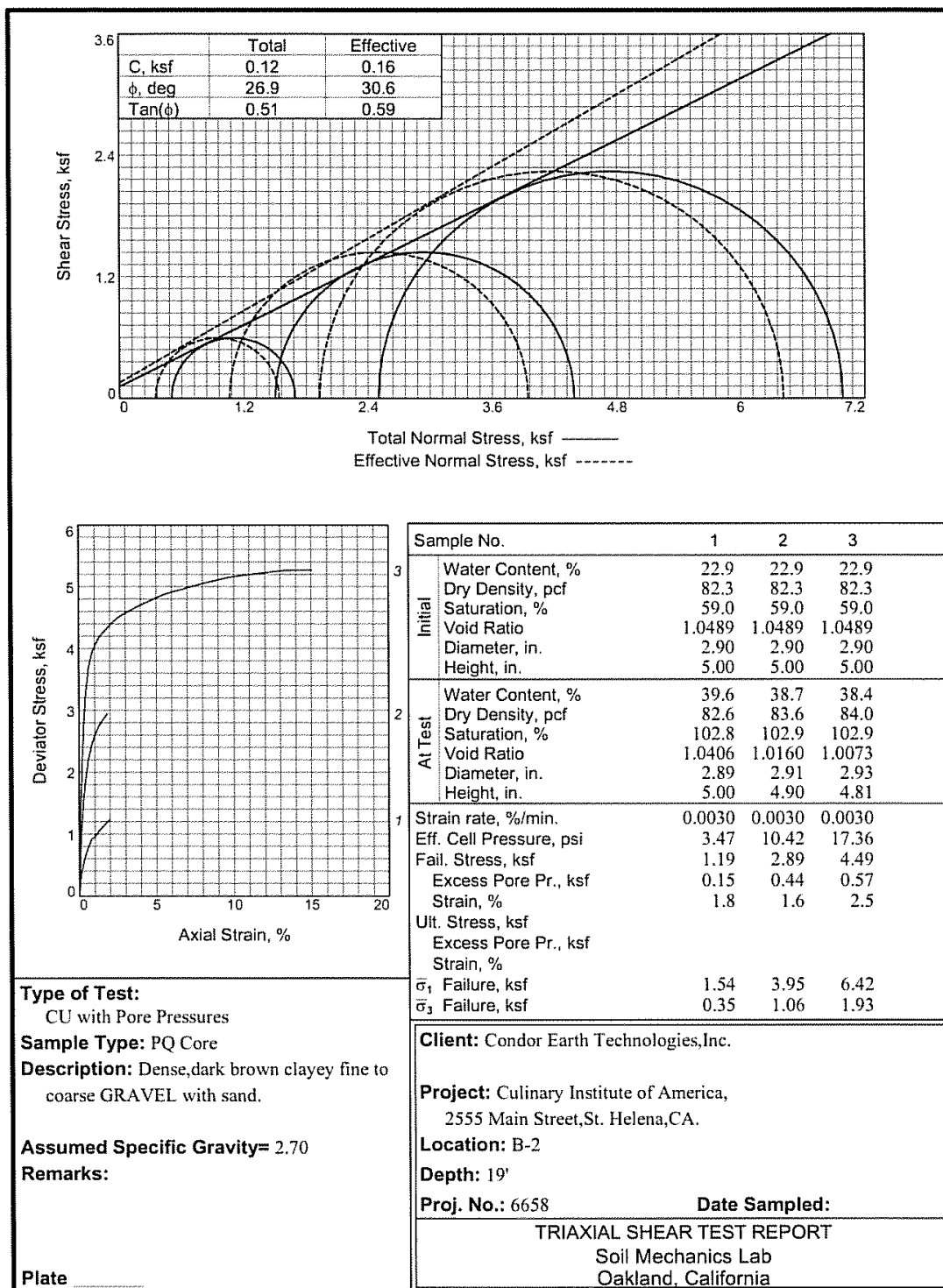




Tested By: MA



Tested By: MA



California State Certified Laboratory No. 2153



1100 Willow Pass Court, Suite A  
Concord, CA 94520-1006

925 462 2771 Fax. 925 462 2775

www.cercoanalytical.com

15 January, 2016

Job No.1601014

Cust. No.12016

Ms. Emily Kentta  
Condor Earth Technologies, Inc.  
P.O. Box 3905  
Sonora, CA 95370

Subject: Project No.: 6658  
Project Name: Culinary Institute of America, 2555 Main St., St. Helena, CA  
Corrosivity Analysis – ASTM Test Methods

Dear Ms. Kentta:

Pursuant to your request, CERCO Analytical has analyzed the soil sample submitted on January 05, 2016. Based on the analytical results, this brief corrosivity evaluation is enclosed for your consideration.

Based upon the resistivity measurement, this sample is classified as “moderately corrosive”. All buried iron, steel, cast iron, ductile iron, galvanized steel and dielectric coated steel or iron should be properly protected against corrosion depending upon the critical nature of the structure. All buried metallic pressure piping such as ductile iron firewater pipelines should be protected against corrosion.

The chloride ion concentration reflects none detected with a detection limit of 15 mg/kg.

The sulfate ion concentration is 15 mg/kg and is determined to be insufficient to damage reinforced concrete structures and cement mortar-coated steel at this location.

The pH of the soil is 7.36, which does not present corrosion problems for buried iron, steel, mortar-coated steel and reinforced concrete structures.

The redox potential is 410-mV, which is indicative of aerobic soil conditions.

This corrosivity evaluation is based on general corrosion engineering standards and is non-specific in nature. For specific long-term corrosion control design recommendations or consultation, please call *JDH Corrosion Consultants, Inc.* at (925) 927-6630.

We appreciate the opportunity of working with you on this project. If you have any questions, or if you require further information, please do not hesitate to contact us.

Very truly yours,  
CERCO ANALYTICAL, INC.

A handwritten signature in black ink, appearing to read 'J. Darby Howard, Jr.', written over the printed name and title.

J. Darby Howard, Jr., P.E.  
President

JDH/jdl  
Enclosure



Client: Condor Earth Technologies, Inc.  
Client's Project No.: 6658  
Client's Project Name: Culinary Institute of America, 2555 Main Street, St. Helena, CA  
Date Sampled: 4-Jan-16  
Date Received: 5-Jan-16  
Matrix: Soil  
Authorization: Laboratory Test Request

1100 Willow Pass Court, Suite A  
Concord, CA 94520-1006  
925 462 2771 Fax: 925 462 2775  
[www.cercoanalytical.com](http://www.cercoanalytical.com)

Date of Report: 15-Jan-2016

[illegible]

|                  |             |             |             |             |             |             |             |
|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Method:          | ASTM D1498  | ASTM D4972  | ASTM D1125M | ASTM G57    | ASTM D4658M | ASTM D4327  | ASTM D4327  |
| Reporting Limit: | -           | -           | 10          | -           | 50          | 15          | 15          |
| Date Analyzed:   | 11-Jan-2016 | 11-Jan-2016 | -           | 12-Jan-2016 | -           | 11-Jan-2016 | 11-Jan-2016 |

  
Cheryl McMillen

Cheryl McMillen  
Laboratory Director

\* Results Reported on "As Received" Basis  
N.D. - None Detected

**Quality Control Summary** - All laboratory quality control parameters were found to be within established limits

Page No. 1





GEOTECHNICAL STUDY REPORT

VINEYARD LODGE EXPANSION  
830 PRATT AVENUE  
ST. HELENA, CALIFORNIA

Project Number:  
5310.02.04.2

*R G H*

*CONSULTANTS, INC.*

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## INTRODUCTION

This report presents the results of our geotechnical study for the Vineyard Lodge expansion project to be constructed at the Culinary Institute of America's facilities located at 830 Pratt Avenue in St. Helena, California. The triangular-shaped property extends over relatively level terrain and contains a vineyard lodge building in the southwest corner (based on true north) of the property along Pratt Avenue and a small triangular-shaped building just northwest of the vineyard lodge building. A paved parking lot lies in front of the building to the northeast and is accessed by Pratt Avenue. The site is bounded on the southwestern side by railroad tracks and on the northeastern side by a vineyard. Wastewater treatment ponds lie to the north of the property. The site location is shown on Plate 1, Appendix A.

We understand it is proposed to remove the triangular-shaped building and construct a new building northwest of the main building and parking area. The new building is to have a concrete slab-on-grade floor. New parking that extends off the existing lot is also planned adjacent to the proposed building. Smaller proposed improvements include two new trellis areas, a new dumpster enclosure, and new walkways.

Actual foundation loads are not known at this time. We anticipate the loads will be typical for the light to moderately heavy type of construction planned and that wall and isolated column loads will range from about 1 to 3 kips per lineal foot and 30 to 40 kips, respectively.

Grading plans are not available, but we anticipate that the planned grading will be the minimum amount needed to construct a level building pad and provide the building site and paved areas with positive drainage, and could include cuts and fills on the order of 1 to 4 feet.

Utility plans are not available, but we have assumed for this study that the project utilities will extend no deeper than 8 feet below the existing ground surface. If project

utilities extend deeper, supplemental exploration may be required to evaluate the soil conditions within and below the utility excavations.

### SCOPE

The purpose of our study, as outlined in our Professional Service Agreement dated February 25, 2008, was to generate geotechnical information for the design and construction of the project. Our scope of services included reviewing selected published geologic data pertinent to the site; evaluating subsurface conditions with test borings and laboratory tests; analyzing the field and laboratory data; and presenting this report with the following geotechnical information:

1. A brief description of soil and groundwater conditions observed during our study;
2. A discussion of seismic hazards that may affect the proposed improvements; and
3. Conclusions and recommendations regarding:
  - a. Primary geotechnical engineering concerns and mitigating measures, as applicable;
  - b. Site preparation and grading including remedial grading of weak, porous, compressible surface soils;
  - c. Foundation types, design criteria, and estimated settlement behavior;

Geotechnical Study Report  
May 16, 2008

*RGH Consultants, Inc.*

Vineyard Lodge Expansion  
Project Number: 5310.02.04.2

- d. Support of concrete slabs-on-grade;
- e. Preliminary pavement thickness based on our experience with similar soils and projects and the results of one R-value test on the anticipated subgrade soils;
- f. Utility trench backfill;
- g. Geotechnical engineering drainage improvements; and
- h. Supplemental geotechnical engineering services.

## **STUDY**

### **Site Exploration**

We reviewed our previous geotechnical studies in the vicinity and selected geologic references pertinent to the site. The geologic literature reviewed is listed in Appendix B.

On April 28, 2008, we performed a geotechnical reconnaissance of the site and explored the subsurface conditions by drilling six test borings to depths ranging from about 5½ to 18½ feet. The borings were drilled with a truck-mounted drill rig equipped with 8-inch diameter, hollow stem augers at the approximate locations shown on the Exploration Plan, Plate 2. The test boring locations were determined approximately by pacing their distance from features shown on the Exploration Plan and should be considered accurate only to the degree implied by the method used. Our geologist located

and logged the borings and obtained samples of the materials encountered for visual examination, classification and laboratory testing.

Relatively undisturbed samples were obtained from the borings at selected intervals by driving a 2.43-inch inside diameter, split spoon sampler, containing 6-inch long brass liners, using a 140-pound hammer dropping approximately 30 inches. The sampler was driven 12 to 18 inches. The blows required to drive each 6-inch increment were recorded and the blows required to drive the last 12 inches, or portion thereof, were converted to equivalent Standard Penetration Test (SPT) blow counts for correlation with empirical data. Disturbed samples were also obtained at selected depths by driving a 1.375-inch inside diameter (2-inch outside diameter) SPT sampler, without liners or rings, using a 140-pound hammer dropping approximately 30 inches. The sampler was driven 12 to 18 inches, the blows to drive each 6-inch increment were recorded, and the blows required to drive the final 12 inches, or portion thereof, are provided on the test boring logs. A disturbed "bulk" sample was also obtained from the test borings and placed in a plastic bucket.

The logs of the test borings showing the materials encountered, groundwater conditions, converted blow counts, and sample depths are presented on Plates 3 through 8. The soils are described in accordance with the Unified Soil Classification System, outlined on Plate 9.

The test boring logs show our interpretation of subsurface soil and groundwater conditions on the date and at the locations indicated. Subsurface conditions may vary at other locations and times. Our interpretation is based on visual inspection of soil samples, laboratory test results, and interpretation of drilling and sampling resistance. The location of the soil boundaries should be considered approximate. The transition between soil types may be gradual.



**Laboratory Testing**

The samples obtained from the borings were transported to our office and re-examined by the project engineer to verify soil classifications, evaluate characteristics, and assign tests pertinent to our analysis. Selected samples were laboratory tested to determine their water content, dry density, classification (Atterberg Limits, grain size distribution), shear strength, expansion potential (Expansion Index - EI) and R-value. Some test results are presented on the test boring logs. Results of the classification, shear strength, and R-value tests are presented on Plates 10 through 14.

**SITE CONDITIONS****General**

Napa County is located within the California Coast Range geomorphic province. This province is a geologically complex and seismically active region characterized by sub-parallel northwest-trending faults, mountain ranges and valleys. The oldest bedrock units are the Jurassic-Cretaceous Franciscan Complex and Great Valley sequence sediments originally deposited in a marine environment. Subsequently, younger rocks such as the Tertiary-age Sonoma Volcanics group, the Plio-Pleistocene-age Clear Lake Volcanics and sedimentary rocks such as the Guinda, Domengine, Petaluma, Wilson Grove, Cache, Huichica and Glen Ellen formations were deposited throughout the province. Extensive folding and thrust faulting during late Cretaceous through early Tertiary geologic time created complex geologic conditions that underlie the highly varied topography of today. In valleys, the bedrock is covered by thick alluvial soils. The site is located near the center of the Napa Valley floor. The Napa Valley is a long, narrow northwest-trending alluvial plain flanked by northwest-trending mountain ridges.

**Geology and Soils**

The United States Geological Survey (USGS) geologic maps (R.W. Graymer, et al., 2007) indicate the property is underlain by Holocene Epoch alluvial fan deposits. The alluvial fan deposits are shown to comprise moderately to poorly sorted and moderately to poorly bedded sand, gravel, silt, and clay, which were deposited where streams emanate from upland regions onto valley floors or plains.

Mapping by the U.S. Soil Conservation Service (Soil Survey Staff, 2008) has classified soil over the portions of the property proposed for development as belonging to the Bale clay loam series. The Bale clay loam series comprises two soil horizons. The topsoil is shown to be a clay loam that exhibits medium plasticity (LL = 30-50; PI = 10-25) and moderate shrink-swell potential, and extends from a depth of 0 to 24 inches. The subsoil is shown to be a stratified loam to gravelly sandy loam that exhibits low plasticity (LL = 15-20; PI = NP-5) and low shrink-swell potential, and extends from a depth of 24 to 60 inches. Runoff over these soils is slow. The hazard of erosion is slight. The risk of corrosion is given as high (topsoil) and low (subsoil) for uncoated steel, and moderate (topsoil and subsoil) for concrete. Performing corrosivity tests to verify these values was not part of our requested and/or proposed scope of work. Should the need arise, we would be pleased to provide a proposal to evaluate these characteristics.

**Landslides**

The USGS maps of landslides (Dwyer, 1976) do not indicate large-scale slope instability at the planned Vineyard Lodge Expansion site, and we did not observe active landslides at the site during our study.

## **Surface**

The property extends primarily over relatively level alluvial terrain outside of the Napa River flood plain. The proposed building site is covered with seasonal grass and weeds and is located adjacent to the existing facility. Natural drainage consists of sheet flow over the ground surface that concentrates in man made surface drainage elements such as roadside ditches, and natural drainage elements such as swales and creeks.

In general, the ground surface is moderately hard. However, soils in the area that appear hard and strong when dry will typically lose strength rapidly and settle under the loads of fills, foundations and slabs as their moisture content increases and approaches saturation. This typically occurs because the surface soils are weak, porous and compressible.

## **Subsurface**

Our borings and laboratory tests indicate that the portion of the site we studied is blanketed to depths of 6 to 8 feet with clayey soils that are weak, porous and compressible to a depth of 2 to 3 feet. As mentioned, porous soils appear hard and strong when dry but become weak and compressible as their moisture content increases towards saturation. These soils exhibit low plasticity ( $LL = 35$ ;  $PI = 15$ ) and low expansion potential ( $EI = 52$ ). The surface soils are locally covered by 1 to 2 feet of heterogeneous fill. Heterogeneous fill is a material with varying density, strength, compressibility and shrink-swell characteristics that often has an unknown origin and placement history. The Liquid Limit ( $LL$ ) and Plasticity Index ( $PI$ ) for the fill soils matched the underlying natural soils (described above), while the Expansion Index was 46. These surface materials are underlain by interbedded sand and gravel with varying amounts of clay and cobbles. A detailed description of subsurface conditions found in our borings is given on Plates 3 through 8, Appendix A.

Geotechnical Study Report  
May 16, 2008

*RGH Consultants, Inc.*

Vineyard Lodge Expansion  
Project Number: 5310.02.04.2

### **Groundwater**

Free groundwater was first detected in our borings at depths ranging from 7 to 11 feet below the ground surface at the time of drilling. When the holes were backfilled 1½ hours after drilling was completed, the water level had risen a depth of about 7 feet. Fluctuation in the groundwater level typically occurs because of a variation in rainfall intensity, duration and other factors such as flooding and periodic irrigation.

### **Flooding**

Our review of the Federal Emergency Management Agency (FEMA) Flood Zone Map for Napa County, California, Unincorporated (NO. 060205) dated February 1, 1980, indicates that the proposed building site is located within Zone “C,” an area of minimal or no flooding. Evaluation of flooding potential is typically the responsibility of the project civil engineer.

## **DISCUSSION AND CONCLUSIONS**

### **Seismic Hazards**

#### **General**

We did not observe subsurface conditions within the portion of the property we studied that would suggest the presence of materials that may be susceptible to seismically induced lurching. Therefore, we judge the potential for the occurrence of this phenomenon at the site to be low.

### Seismicity

Data presented by the Working Group on California Earthquake Probabilities (2007) estimates the chance of one or more large earthquakes (Magnitude 6.7 or greater) in the San Francisco Bay region within the next 30 years to be approximately 63 percent. Therefore, future seismic shaking should be anticipated at the site. It will be necessary to design and construct the proposed Vineyard Lodge expansion project in strict adherence with current standards for earthquake-resistant construction.

### Faulting

We did not observe landforms within the area that would indicate the presence of active faults and the site is not within a current Alquist-Priolo Earthquake Fault Zone (Bryant and Hart, 2007). Therefore, we believe the risk of fault rupture at the site is low. However, the site is within an area affected by strong seismic activity. Several northwest-trending Earthquake Fault Zones exist in close proximity to and within several miles of the site (Bortugno, 1982; Bryant, 1982). The shortest distances from the site to the mapped surface expression of these faults are presented below in Table 1.

**TABLE 1  
ACTIVE FAULT PROXIMITY**

| <b>Fault</b>             | <b>Direction</b> | <b>Distance-Miles</b> |
|--------------------------|------------------|-----------------------|
| San Andreas              | SW               | 32                    |
| Healdsburg-Rodgers Creek | SW               | 12                    |
| Concord-Green Valley     | SE               | 19                    |
| Cordelia                 | SE               | 21                    |
| West Napa                | S                | 9.1                   |
| Maacama                  | NW               | 14                    |
| Konocti                  | NW               | 25                    |
| Hunting Creek            | N                | 18                    |

### Liquefaction

Liquefaction is a rapid loss of shear strength experienced in saturated, predominantly granular soils below the groundwater level during strong earthquake ground shaking due to an increase in pore water pressure. The occurrence of this phenomenon is dependent on many complex factors including the intensity and duration of ground shaking, particle size distribution and density of the soil.

Granular soils were encountered at the site below the groundwater table. Therefore, we performed an analysis of the blow count data from our borings using the methods of Seed and Idriss (1982), Seed and others (1985), and Youd and Idriss (2001). These procedures normalize the blow counts to account for overburden pressure, rod length, hammer energy, and fines (percent of silt and clay) content. Once the blow counts are normalized and adjusted to a clean sand blow count, the critical blow count is then determined. The critical blow count is calculated using the same procedures referenced above and requires a peak ground acceleration and design earthquake magnitude.

Peak ground acceleration (PGA) was determined using the methods in the 2007 California Building Code (CBC) and Chapter 11 of the American Society of Civil Engineers (ASCE) Standard 7-05, titled "Minimum Design Loads for Buildings and Other Structures" (2006). Section 11.8.3 of ASCE Standard 7-05 states that the PGA for liquefaction evaluation can be defined as the design spectral response acceleration at short periods with 5 percent damping ( $S_{DS}$ ) divided by 2.5. The  $S_{DS}$  value is determined using the United States Geological Survey's Earthquake Ground Motion Parameter Java Application (2007). Based on the site's latitude and longitude of 38.514°N and -122.476°W, respectively, the  $S_{DS}$  value Site Class D is 0.818g. Therefore, the PGA used for our evaluation is 0.33g.

The West Napa fault is most likely controlling the ground motions at the site. According to Petersen (1996), the West Napa fault is capable of a  $M_M$  6.5 earthquake. Using this information and the scaling factors presented in Youd and Idriss (2001), the critical blow count at the site ranges from 15 to 20 blows per foot depending on depth.

The normalized and adjusted blow counts at the site exceed this value. Therefore, we judge that the potential for liquefaction at the site is low.

### Densification

Densification is the settlement of loose, granular soils above the groundwater level due to earthquake shaking. Typically, granular soils that would be susceptible to liquefaction, if saturated, are susceptible to densification. As discussed in the "Liquefaction" section, the soils at the site have a low potential for liquefaction. Therefore, we judge that there is a low potential for densification to impact structures at the site.

## Geotechnical Issues

### General

Based on our study, we judge the proposed Vineyard Lodge Expansion can be built as planned, provided the recommendations presented in this report are incorporated into its design and construction. The primary geotechnical concerns during design and construction of the project are:

1. The presence of 2 to 3 feet of weak, porous, compressible, clayey surface soils and heterogeneous fill;
2. The detrimental effects of uncontrolled surface runoff and groundwater seepage on the long-term satisfactory performance of projects of this type, especially those constructed on alluvial fans, given the erosion potential and porous nature of the surface soils; and

3. The strong ground shaking predicted to impact the site during the life of the project.

#### Heterogeneous Fill

Heterogeneous fills of unknown quality and unknown method of placement, such as those found at the project site, can settle and/or heave erratically under the load of new fills, structures, slabs, and pavements. Footings, slabs, and pavements supported on heterogeneous fill could also crack as a result of such erratic movements. Thus, where not removed by planned grading, the heterogeneous fill must be excavated and replaced as an engineered fill if it is to be used for structural support.

#### Weak, Porous Surface Soils

Weak, porous surface soils, such as those found at the improvement area, appear hard and strong when dry but will lose strength rapidly and settle under the load of fills, foundations, slabs, and pavements as their moisture content increases and approaches saturation. The moisture content of these soils can increase as the result of rainfall, periodic irrigation or when the natural upward migration of water vapor through the soils is impeded by, and condenses under fills, foundations, slabs, and pavements. The detrimental effects of such movements can be remediated by strengthening the soils during grading. This can be achieved by excavating the weak soils and replacing them as properly compacted (engineered) fill. Alternatively, satisfactory foundation support could be obtained below the weak surface soils.

Foundation, Slab and Pavement Support - After remedial grading, satisfactory foundation support for the planned lodge expansion can be obtained from spread footings bottomed on the engineered fill. Interior slab-on-grade floors, exterior slabs and pavements can also be satisfactorily supported on the engineered fill. For exterior slabs



and pavements the engineered fill below subgrade need only be 12 inches thick. The trellis structures can be supported on drilled piers.

#### On-Site Soil Quality

All fill materials used in the building area and exterior slab and pavement subgrade must be select, as subsequently described in "Recommendations." We anticipate that, with the exception of organic matter and of rocks or lumps larger than 6 inches in diameter, the excavated material will be suitable for re-use as general and select fill.

#### Select Fill

The select fill can consist of approved on-site soils or import materials with a low expansion potential. The geotechnical engineer must approve the use of on-site soils as select fill during grading.

#### Settlement

Provided remedial grading is performed and the spread footings are installed in accordance with the recommendations presented herein, we estimate that post-construction differential settlements across the building will be about 1 inch.

#### Surface Drainage

Because of topography and location, the site will be impacted by surface runoff from the alluvial fan surface. In addition, the site soils are susceptible to erosion. Surface runoff typically sheet flows over the ground surface but can be concentrated by the planned site grading, landscaping, and drainage. The surface runoff can pond against

structures and seep into the slab rock. Therefore, strict control of surface runoff is necessary to provide long-term satisfactory performance of projects constructed on or near alluvial fans. It will be necessary to divert surface runoff around improvements and provide positive drainage away from structures. This can be achieved by constructing the building pad several inches above the surrounding area and conveying the runoff into man made drainage elements or natural swales that lead downgradient of the site.

#### Excavation Dewatering

Depending on the time of year of construction, groundwater may be encountered near the planned excavation depth, including utility trenches. Therefore, in order to accomplish the planned excavation, it may be necessary to dewater excavations. The dewatering system can consist of a perforated plastic pipe (in a grid array) embedded in free draining rock. The system should discharge to a sump area that is pumped continuously during construction. The general contractor is responsible for the design, operation and maintenance of the temporary dewatering system. If this system is to be incorporated into the final dewatering system of the structure, we should evaluate its performance during excavation.

### RECOMMENDATIONS

#### Seismic Design

Seismic design parameters presented below are based on Section 1613 titled "Earthquake Loads" of the 2007 California Building Code (CBC). Based on CBC Table 1613.5.2, we have determined a Site Class D should be used for the subject site. Using a site latitude and longitude of 38.514°N and -122.476°W, respectively, and the United

States Geological Survey's Earthquake Ground Motion Parameter Java Application (USGS, 2007) we recommend that the following seismic design criteria be used for structures at the site.

Mapped Maximum Considered Earthquake Spectral Response Acceleration:

$$\begin{aligned} S_s (0.2 \text{ second period}) &= 1.205 \text{ g} \\ S_1 (1 \text{ second period}) &= 0.501 \text{ g} \end{aligned}$$

Maximum Considered Earthquake Spectral Response Acceleration for Site Class D:

$$\begin{aligned} S_{MS} (0.2 \text{ second period}) &= 1.226 \text{ g} \\ S_{M1} (1 \text{ second period}) &= 0.752 \text{ g} \end{aligned}$$

Design Spectral Response Acceleration (5% damped) for Site Class D:

$$\begin{aligned} S_{DS} (0.2 \text{ second period}) &= 0.818 \text{ g} \\ S_{D1} (1 \text{ second period}) &= 0.501 \text{ g} \end{aligned}$$

## **Grading**

### **Site Preparation**

Areas to be developed should be cleared of vegetation and debris, including that left by the removal of obsolete structures. Trees and shrubs that will not be part of the proposed development should be removed and their primary root systems grubbed. Cleared and grubbed material should be removed from the site and disposed of in accordance with County Health Department guidelines. We did not observe septic tanks, leach lines or underground fuel tanks during our study. Any such appurtenances found during grading should be capped and sealed and/or excavated and removed from the site, respectively, in accordance with established guidelines and requirements of the County Health Department. Voids created during clearing should be backfilled with engineered fill as recommended herein.

### Stripping

Areas to be graded should be stripped of the upper few inches of soil containing organic matter. Soil containing more than two percent by weight of organic matter should be considered organic. Actual stripping depth should be determined by a representative of the geotechnical engineer in the field at the time of stripping. The strippings should be removed from the site, or if suitable, stockpiled for re-use as topsoil in landscaping.

### Excavations

Following initial site preparation, excavation should be performed as planned or recommended herein. Excavations extending below the proposed finished grade should be backfilled with suitable materials compacted to the requirements given below.

Within building areas and fill areas, including areas outside of the building footprint, the old fill and weak, porous, compressible surface soils should be excavated to a minimum depth of 3 feet below the surface exposed by stripping. The excavation of weak, compressible soils and old fill should also extend at least 12 inches below exterior slab and pavement subgrade where those improvements are not supported on new fill.

The excavation of weak, porous, compressible surface materials should extend at least 5 feet beyond the outside edge of the exterior footings of the proposed buildings and 3 feet beyond the edge of exterior slabs and pavements and the toe of fills outside of building areas. The excavated materials should be stockpiled for later use as compacted fill, or removed from the site, as applicable.

At all times, temporary construction excavations should conform to the regulations of the State of California, Department of Industrial Relations, Division of Industrial Safety or other stricter governing regulations. The stability of temporary cut slopes, such as those constructed during the installation of underground utilities, should be the responsibility of the contractor. Depending on the time of year when grading is performed, and the surface conditions exposed, temporary cut slopes may need to be

excavated to 1½:1, or flatter. The tops of the temporary cut slopes should be rounded back to 2:1 in weak soil zones.

#### Fill Quality

All fill materials should be free of perishable matter and rocks or lumps over 6 inches in diameter and must be approved by the geotechnical engineer prior to use. We judge the on-site soils are generally suitable for use as general and select fill. The suitability of the on-site soils for use as select fill should be verified during grading.

#### Select Fill

Select fill should be free of organic matter, have a low expansion potential, and conform in general to the following requirements:

| SIEVE SIZE                            | PERCENT PASSING<br>(By Dry Weight) |
|---------------------------------------|------------------------------------|
| 6 inch                                | 100                                |
| 4 inch                                | 90 - 100                           |
| No. 200                               | 10 - 60                            |
| Liquid Limit - 40 Percent Maximum     |                                    |
| Plasticity Index - 15 Percent Maximum |                                    |

In general, imported fill, if needed, should be select. Material not conforming to these requirements may be suitable for use as import fill; however, it shall be the contractor's responsibility to demonstrate that the proposed material will perform in an equivalent manner. The geotechnical engineer should approve imported materials prior to use as compacted fill. The grading contractor is responsible for submitting, at least 72 hours (3 days) in advance of its intended use, samples of the proposed import materials for laboratory testing and approval by the soils engineer.

### Fill Placement

The surface exposed by stripping and removal of heterogeneous fill and weak, compressible surface soils should be scarified to a depth of at least 6 inches, uniformly moisture-conditioned to near optimum and compacted to at least 90 percent of the maximum dry density of the materials as determined by ASTM Test Method D-1557. Approved fill material should then be spread in thin lifts, uniformly moisture-conditioned to near optimum, and properly compacted. All structural fills, including those placed to establish site surface drainage, should be compacted to at least 90 percent relative compaction. Only approved select materials should be used for fill within the building areas and within the upper 12 inches of exterior slabs and pavement subgrades.

### Permanent Fill Slopes

In general, fill slopes should be designed and constructed at slope gradients of 2:1 (horizontal to vertical) or flatter, unless otherwise approved by the geotechnical engineer in specified areas. Where steeper slopes are required, retaining walls should be used, and the geotechnical engineer should be consulted regarding the retaining wall design criteria. Fill slopes should be constructed by overfilling and cutting the slope to final grade. "Track walking" of a slope to achieve slope compaction is not an acceptable procedure for slope construction. The geotechnical engineer is not responsible for measuring the angles of these slopes. Denuded slopes should be planted with fast-growing, deep-rooted groundcover to reduce sloughing or erosion. The fill slope inclinations recommended herein address only the stability of the slopes. It should not be inferred that they address the feasibility of landscaping and weed control. Where these are concerns, the slopes should be flattened accordingly.

### Wet Weather Grading

Generally, grading is performed more economically during the summer months when on-site soils are usually dry of optimum moisture content. Delays should be anticipated in site grading performed during the rainy season or early spring due to excessive moisture in on-site soils. Special and relatively expensive construction procedures, including dewatering of excavations and importing granular soils, should be anticipated if grading must be completed during the winter and early spring or if localized areas of soft saturated soils are found during grading in the summer and fall.

Open excavations also tend to be more unstable during wet weather as groundwater seeps towards the exposed cut slope. Severe sloughing and occasional slope failures should be anticipated. The occurrence of these events will require extensive clean up and the installation of slope protection measures, thus delaying projects. The general contractor is responsible for the performance, maintenance and repair of temporary cut slopes.

### Foundation Support

Provided the weak surface soils are removed by or strengthened by remedial grading as recommended herein, the proposed lodge expansion building can be supported on continuous and isolated spread footings that bottom on engineered fill. The planned trellis structures can be supported on drilled, cast-in-place concrete piers as detailed herein.

### Spread Footings

Spread footings should be at least 12 inches wide and should bottom on engineered fill at least 18 inches below pad subgrade. Additional embedment or width may be needed to satisfy code and/or structural requirements.

The bottoms of all footing excavations should be thoroughly cleaned out or wetted and compacted using hand-operated tamping equipment prior to placing steel and concrete. This will remove the soils disturbed during footing excavations, or restore their adequate bearing capacity, and reduce post-construction settlements. Footing excavations should not be allowed to dry before placing concrete. If shrinkage cracks appear in soils exposed in the footing excavations, the soil should be thoroughly moistened to close all cracks prior to concrete placement. The moisture condition of the foundation excavations should be checked by the geotechnical engineer no more than 24 hours prior to placing concrete.

Bearing Pressures - Footings installed in accordance with these recommendations may be designed using allowable bearing pressures of 1800, 2700 and 3600 pounds per square foot (psf), for dead loads, dead plus code live loads, and total loads (including wind and seismic), respectively.

Lateral Pressures - The portion of spread footing foundations extending into select engineered fill may impose a passive equivalent fluid pressure and a friction factor of 350 pcf and 0.35, respectively, to resist sliding. Passive pressure should be neglected within the upper 6 inches, unless the soils are confined by concrete slabs or pavements.

### Drilled Piers

Drilled, cast-in-place, reinforced concrete piers can be used for foundation support for the planned trellis structures. Drilled piers should be at least 12 inches in diameter and



should extend at least 6 feet below planned pad elevation. Where fill is placed to create a pad and the weak, compressible surface soils are not strengthened by grading, the piers should be deepened in direct proportion to the thickness of fill. Larger piers and deeper embedment may be needed to resist the lateral forces imposed by earthquakes per the 2007 California Building Code. Piers should be spaced no closer than 3 pier diameters, center to center.

Skin Friction - The portion of the piers extending below the weak surface soils may be designed using an allowable skin friction of 500 psf for dead load plus long term live loads. This value can be increased by  $\frac{1}{3}$  for total loads, including downward vertical wind or seismic forces. A skin friction value of 350 psf should be used to resist uplift forces due to wind or seismic. End bearing should be neglected because of the difficulty of cleaning out small diameter pier holes, and the uncertainty of mobilizing end bearing and skin friction simultaneously.

Lateral Forces - Lateral loads on piers will be resisted by passive pressure on the soil. An equivalent fluid pressure of 350 pcf acting on two pier diameters should be used. Confinement for passive pressure may be assumed from 3 feet below existing grade. Where fill is placed to create a pad and the weak compressible soils are not strengthened by grading, the confinement depth should increase in direct proportion to the thickness of fill.

Pier Drilling - We encountered groundwater and/or caving-prone soils within the planned pier depth during our study. If groundwater is encountered during drilling, it may be necessary to de-water the holes and/or place the concrete by the tremie method. If caving soils are encountered, it may be necessary to case the holes. Difficult drilling may be required to achieve the required penetration. The drilling subcontractor should review this report, become familiar with site conditions as they pertain to his operation and draw

his own conclusions regarding drilling difficulty, suitable drill rigs and the need for casing and dewatering prior to bidding.

Concrete - Concrete mix design and placement should be done in accordance with the current ADSC and/or ACI specifications. Concrete should not be allowed to mushroom at the top of the piers or below the bottom of grade beams.

### Slab-On-Grade

Provided grading is performed in accordance with the recommendations presented herein, slabs should be underlain by engineered fill. Slab-on-grade subgrade should be rolled to produce a dense, uniform surface. The slabs should be underlain with a capillary moisture break consisting of at least 4 inches of clean, free-draining crushed rock or gravel (excluding pea gravel) at least 1/4-inch and no larger than 3/4-inch in size. Class 2 aggregate base can be used for slab rock under exterior slabs. Interior area slabs should be provided with an underdrain system. The installation of this subdrain system is discussed in the "Geotechnical Drainage" section. Slabs should be designed by the project civil or structural engineer to support the anticipated loads, reduce cracking and provide protection against the infiltration of moisture vapor.

A vapor barrier should be placed under all slabs-on-grade that are likely to receive an impermeable floor finish or be used for any purpose where the passage of water vapor through the floor is undesirable. RGH does not practice in the field of moisture vapor transmission evaluation or mitigation; therefore, we recommend that a qualified person be consulted to evaluate the general and specific moisture vapor transmission paths and any impact on the proposed construction. This person should provide recommendations for mitigation of the potential adverse impact of moisture vapor transmission on various components of the structure as deemed appropriate.

### **Utility Trenches**

The shoring and safety of trench excavations is solely the responsibility of the contractor. Attention is drawn to the State of California Safety Orders dealing with "Excavations and Trenches."

Unless otherwise specified by the County of Napa, on-site, inorganic soil may be used as general utility trench backfill. Where utility trenches support pavements, slabs and foundations, trench backfill should consist of aggregate baserock. The baserock should comply with the minimum requirements in Caltrans Standard Specifications, Section 26 for Class 2 Aggregate Base. Trench backfill should be moisture-conditioned as necessary, and placed in horizontal layers not exceeding 8 inches in thickness, before compaction. Each layer should be compacted to at least 90 percent relative compaction as determined by ASTM Test Method D-1557. The top 6 inches of trench backfill below vehicle pavement subgrades should be moisture-conditioned as necessary and compacted to at least 95 percent relative compaction. Jetting or ponding of trench backfill to aid in achieving the recommended degree of compaction should not be attempted.

### **Pavements**

Based on our study, we believe the near-surface clayey soils will have a low to moderate supporting capacity, after proper compaction, when used as a pavement subgrade. As shown on Plate 12, an R-value of 12 was measured on a bulk sample of near-surface soil obtained near the planned parking area. Because of potential variation in the on-site soils, we selected an R-value of 10 for use in pavement design calculations.

Based on the selected R-value, we have computed pavement sections for Traffic Indices (TI) ranging from 5.0 to 7.0 on Table 2, page 24. The project engineer, in consultation with City/County officials, should choose the pertinent (TI) for this project.

**TABLE 2**  
**PAVEMENT SECTIONS**

| TI  | THICKNESS (feet)    |                              |                               |
|-----|---------------------|------------------------------|-------------------------------|
|     | ASPHALT<br>CONCRETE | CLASS 2<br>AGGREGATE<br>BASE | MINIMUM<br>ENGINEERED<br>FILL |
| 7.0 | 0.30                | 1.25                         | 1.0                           |
| 6.5 | 0.30                | 1.10                         | 1.0                           |
| 6.0 | 0.25                | 1.05                         | 1.0                           |
| 5.5 | 0.25                | 0.90                         | 1.0                           |
| 5.0 | 0.20                | 0.85                         | 1.0                           |

Pavement thicknesses were computed using Method 301 F of the Caltrans Highway Design Manual and are based on a pavement life of 20 years. These recommendations are intended to provide support for the auto and light truck traffic represented by the indicated Traffic Indices. They are not intended to provide pavement sections for heavy concentrated construction storage or wheel loads such as forklifts, parked truck-trailers and concrete trucks or for post-construction concentrated wheel loads such as self-loading dumpster trucks.

In areas where heavy construction storage and wheel loads are anticipated, the pavements should be designed to support these loads. Support could be provided by increasing pavement sections or by providing reinforced concrete slabs. Alternatively, paving can be deferred until heavy construction storage and wheel loads are no longer present. Loading areas for self-loading dumpster trucks should be provided with reinforced concrete slabs at least 6 inches thick, and reinforced with No. 4 bars at 12-inch centers each way. Alternatively, the asphalt concrete section should be increased to at least 8 inches in these areas.

Prior to placement of aggregate base and subbase materials, the upper 6 inches of the pavement subgrade soils should be scarified, uniformly moisture-conditioned to near optimum, and compacted to at least 95 percent relative compaction to form a firm, non-

yielding surface. Aggregate subbase and aggregate base materials should be spread in thin layers, uniformly moisture-conditioned, and compacted to at least 95 percent relative compaction to form a firm, non-yielding surface. The materials and methods used should conform to the requirements of the County of Napa and the current edition of the Caltrans Standard Specifications, except that compaction requirements should be based on ASTM Test Method D-1557. Aggregate used for the base course should comply with the minimum requirements specified in Caltrans Standard Specifications, Section 26 for Class 2 Aggregate Base. Aggregate used for the subbase course should be non-expansive and should comply with the minimum requirements specified in Section 25 for Class 2 Aggregate Subbase.

#### Parking Lot Drainage

Water tends to migrate under pavements and collect in the aggregate courses at low areas on parking lot subgrade soils, such as around storm drain inlets and the thread of paved swales leading to inlets. The ponded water will soften subgrade soils and, under repetitive heavy-wheel loads, will induce inordinately high stresses on the subgrade and pavement components that could result in untimely maintenance. Under-pavement drainage can be improved and maintenance reduced by replacing a 12-inch wide strip (extending at least 15 feet on either side of the inlet) of the select subbase layer or subgrade soils with a subdrain consisting of ¾-inch or 1½-inch free-draining Class 1 Permeable Material. The drain rock should be outletted into the storm drain inlet. Storm drain trenches can be made to serve as pavement subdrains. We should be consulted to verify the suitability of storm drain trenches as pavement subdrains in a case-specific basis.

Where pavements will abut landscaped areas, the pavement baserock layer and subgrade soils should be protected against saturation from irrigation and rainwater with a subdrain, similar to that previously discussed. The subdrain should extend to a depth of at least 12 inches below the bottom of the baserock layer. Alternatively, a grouted moisture

cut-off extending at least 12 inches below subgrade should be provided behind or below the curb and gutter.

### Wet Weather Paving

In general, the pavements should be constructed during the dry season to avoid the saturation of the subgrade and base materials, which often occurs during the wet winter months. If pavements are constructed during the winter, a cost increase relative to drier weather construction should be anticipated. Unstable areas may have to be overexcavated to remove soft soils. The excavations will probably require backfilling with imported crushed (ballast) rock. The geotechnical engineer should be consulted for recommendations at the time of construction.

## **Geotechnical Drainage**

### Surface

Surface water should be diverted away from slopes, foundations, and edges of pavements. Surface drainage gradients within 5 feet of building foundations should be constructed with a minimum slope of 2 percent for paved areas and 4 percent for unpaved areas. Where a flatter gradient is required to satisfy design constraints, area drains should be installed with a spacing no greater than about 20 feet. Roofs should be provided with gutters and the downspouts should be connected to closed (glued Schedule 40 PVC or better) conduits discharging well away from foundations, onto paved areas, onto erosion resistant natural drainages, or into the site's surface drainage system. Roof downspouts and surface drains must be maintained entirely separate from the slab underdrains recommended hereinafter.

Water seepage or the spread of extensive root systems into the soil subgrade of footings, slabs or pavements could cause differential movements and consequent distress in these structural elements. Landscaping should be planned with consideration for these potential problems.

### Slab Underdrains

Where interior slab subgrades are less than 6 inches above adjacent exterior grade and where migration of moisture through the slab would be detrimental, slab underdrains should be installed to dispose of surface and/or groundwater that may seep and collect in the slab rock. Slab underdrains should consist of trenches that extend at least 6 inches below the bottom of the slab rock and slope to drain by gravity. The slab underdrain trenches should be at least 6 inches wide and spaced no further than 15 feet, both ways. Additional drain trenches should be installed, as necessary, to drain all isolated under slab areas. Four-inch diameter perforated pipe (SDR 35 or better) sloped to drain to outlets by gravity should be placed in the bottom of the trenches. Slab underdrain trenches should be backfilled to subgrade level with clean, free draining slab rock. An illustration of this system is shown on Plate 15. If slab underdrains are not used, it should be anticipated that water will enter the slab rock, permeate through the concrete slab and ruin floor coverings.

### Maintenance

Periodic land maintenance will be required. Surface and subsurface drainage facilities should be checked frequently, and cleaned and maintained as necessary or at least annually. A dense growth of deep-rooted ground cover must be maintained on all slopes to reduce sloughing and erosion. Sloughing and erosion that occurs must be repaired promptly before it can enlarge.

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May 16, 2008

*RGH Consultants Inc.*

Vineyard Lodge Expansion  
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### **Supplemental Services**

RGH Consultants, Inc. (RGH) recommends that we be retained to review the project plans and specifications to determine if they are consistent with our recommendations. In addition, we should be retained to observe construction, particularly site excavations, compaction of fills and backfills, foundation and subdrain installations, and perform field and laboratory testing. As part of these services, we recommend that prior to construction a meeting be held at the site that includes, but is not limited to, the owner or owner's representative, the general contractor, the grading contractor, the foundation contractor, the underground contractor, any specialty contractors, the project civil engineer, other members of the project design team and RGH. This meeting should serve as a time to discuss and answer questions regarding the recommendations presented herein and to establish the coordination procedure between the contractors and RGH.

If, during construction, we observe subsurface conditions different from those encountered during the explorations, we should be allowed to amend our recommendations accordingly. If different conditions are observed by others, or appear to be present beneath excavations, RGH should be advised at once so that these conditions may be evaluated and our recommendations reviewed and updated, if warranted. The validity of recommendations made in this report is contingent upon our being notified and retained to review the changed conditions.

If more than 18 months have elapsed between the submission of this report and the start of work at the site, or if conditions have changed because of natural causes or construction operations at, or adjacent to, the site, the recommendations made in this report may no longer be valid or appropriate. In such case, we recommend that we be retained to review this report and verify the applicability of the conclusions and recommendations or modify the same considering the time lapsed or changed conditions. The validity of recommendations made in this report is contingent upon such review.



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These supplemental services are performed on an as-requested basis and are in addition to this geotechnical study. We cannot accept responsibility for items that we are not notified to observe or for changed conditions we are not allowed to review.

### **LIMITATIONS**

This report has been prepared by RGH for the exclusive use of the Culinary Institute of America and its consultants as an aid in the design and construction of the proposed Vineyard Lodge expansion project described in this report.

The validity of the recommendations contained in this report depends upon an adequate testing and monitoring program during the construction phase. Unless the construction monitoring and testing program is provided by our firm, we will not be held responsible for compliance with design recommendations presented in this report and other addendum submitted as part of this report.

Our services consist of professional opinions and conclusions developed in accordance with generally accepted geotechnical engineering principles and practices. We provide no warranty, either expressed or implied. Our conclusions and recommendations are based on the information provided to us regarding the proposed construction, the results of our field exploration, laboratory testing program, and professional judgment. Verification of our conclusions and recommendations is subject to our review of the project plans and specifications, and our observation of construction.

The test borings represent subsurface conditions at the locations and on the date indicated. It is not warranted that they are representative of such conditions elsewhere or at other times. Site conditions and cultural features described in the text of this report are those existing at the time of our field exploration on April 28, 2008, and may not necessarily be the same or comparable at other times.

*RGH Consultants, Inc.*

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The scope of our services did not include an environmental assessment or a study of the presence or absence of toxic mold and/or hazardous, toxic or corrosive materials in the soil, surface water, groundwater or air (on, below or around this site), nor did it include an evaluation or study for the presence or absence of wetlands. These studies should be conducted under separate cover, scope and fee and should be provided by a qualified expert in those fields.

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*RGH Consultants, Inc.*

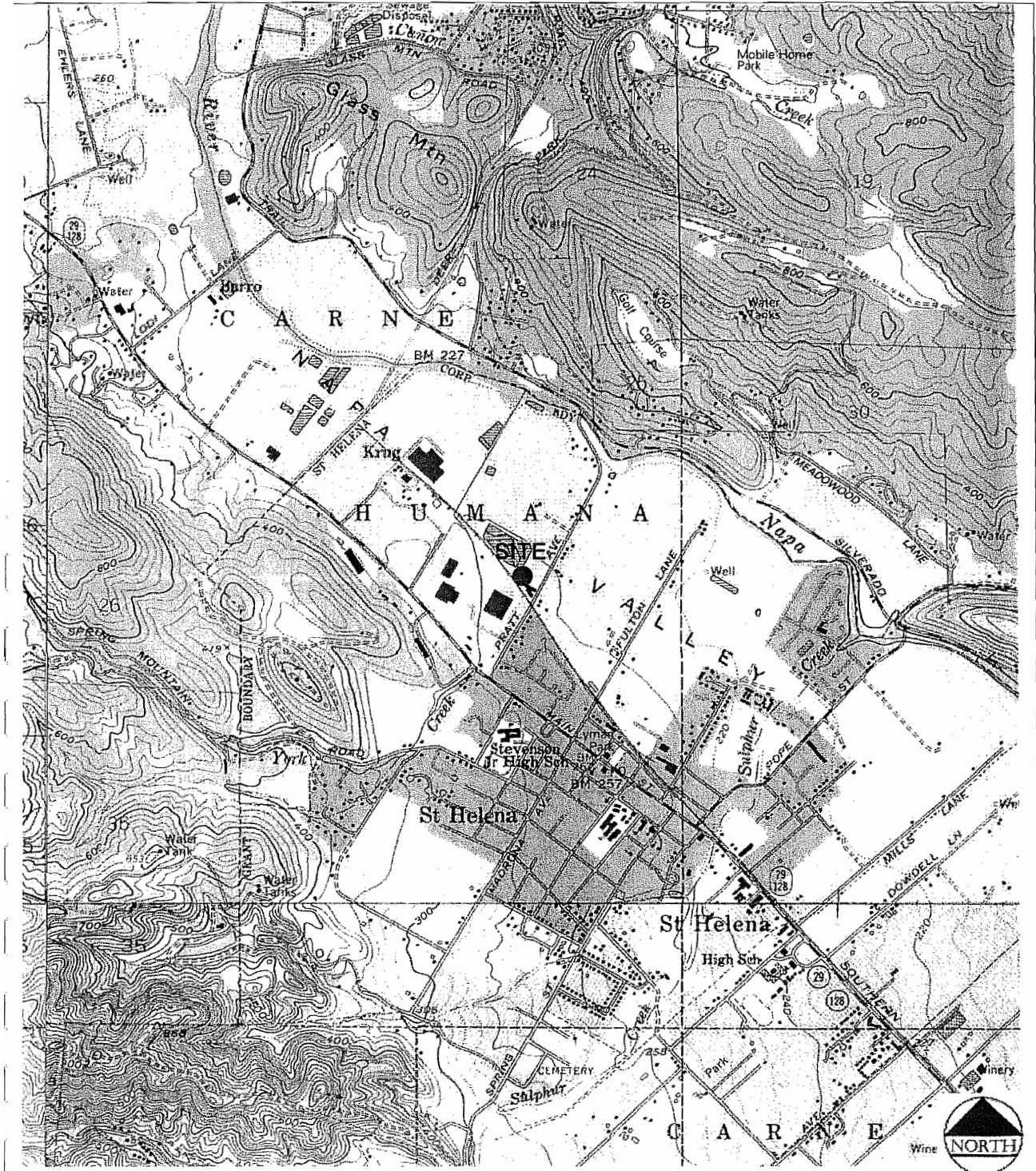
Vineyard Lodge Expansion  
Project Number: 5310.02.04.2

## **APPENDIX A - PLATES**

### **LIST OF PLATES**

|                    |                                                |
|--------------------|------------------------------------------------|
| Plate 1            | Site Location Map                              |
| Plate 2            | Exploration Plan                               |
| Plates 3 through 8 | Logs of Borings 1 through 6                    |
| Plate 9            | Soil Classification Chart and Key to Test Data |
| Plate 10           | Classification Test Data                       |
| Plate 11           | Particle Size Analysis                         |
| Plates 12 and 13   | Strength Test Data                             |
| Plate 14           | Resistance (R) Value Data                      |
| Plate 15           | Typical Subdrain Details Illustration          |

Appendix A



Reference: Maptech TopoQuad, St. Helena, California Quadrangle

Scale: 1" = 2000'

**R<sub>G</sub>H** Consultants, Inc.

Job No: 5310.02.04.2

Appr: *PC*

Drwn: tl

Date: May 2008

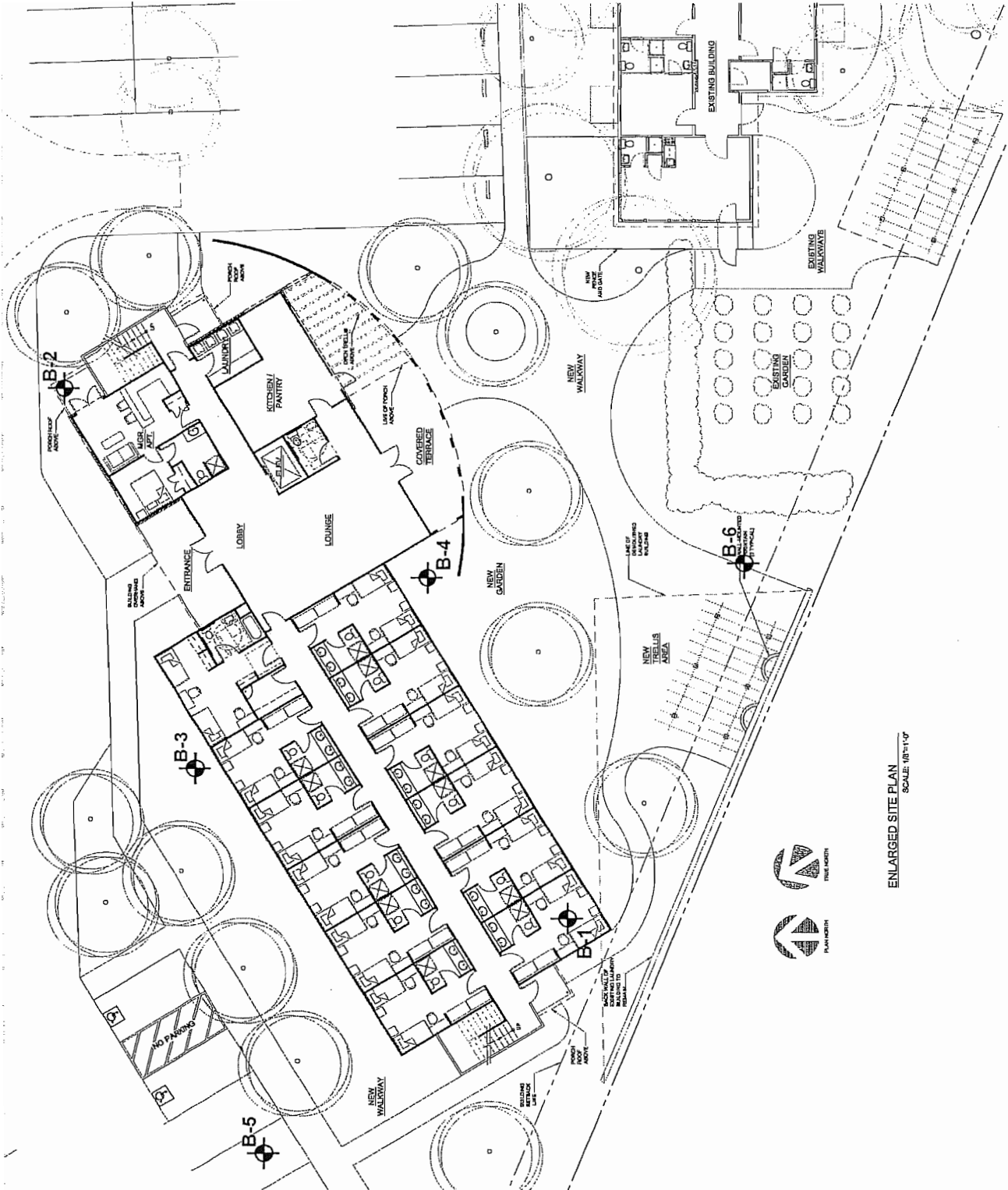
# **SITE LOCATION MAP**

Vineyard Lodge Expansion  
830 Pratt Avenue  
St. Helena, California

PLATE

**1**





Reference: Site Plan by Valley Architects.

Not to Scale

**R<sub>G</sub>H** Consultants, Inc.

Job No: 5310.02.04.2

Appr: *EC*

Drwn: tl

# **EXPLORATION PLAN**

Vineyard Lodge Expansion  
830 Pratt Avenue  
St. Helena, California

PLATE

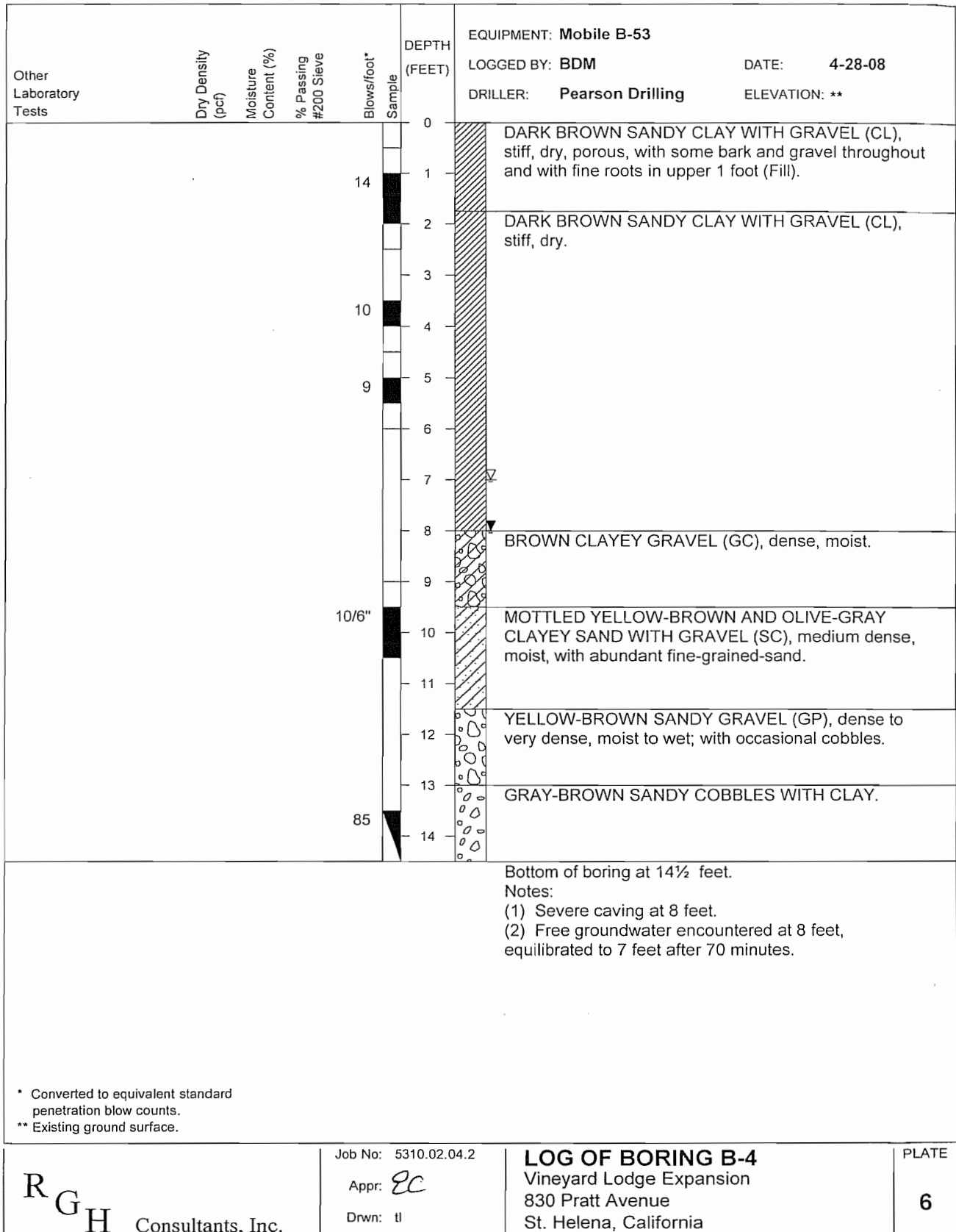
**2**

| Other Laboratory Tests                                                                                            | Dry Density (pcf) | Moisture Content (%) | % Passing #200 Sieve | Blows/foot*                                         | Sample | DEPTH (FEET)                                                                                       | EQUIPMENT: <b>Mobile B-53</b><br>LOGGED BY: <b>BDM</b><br>DRILLER: <b>Pearson Drilling</b> | DATE: <b>4-28-08</b><br>ELEVATION: <b>**</b>                                                   |
|-------------------------------------------------------------------------------------------------------------------|-------------------|----------------------|----------------------|-----------------------------------------------------|--------|----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| LL=35; PI=15<br>EI=52                                                                                             |                   |                      | 60.9                 |                                                     |        | 0                                                                                                  |                                                                                            | DARK BROWN SANDY CLAY WITH GRAVEL (CL),<br>stiff, dry; porous with fine roots in upper 1 foot. |
|                                                                                                                   |                   |                      |                      |                                                     | 1      |                                                                                                    |                                                                                            |                                                                                                |
|                                                                                                                   |                   |                      |                      |                                                     | 2      |                                                                                                    |                                                                                            |                                                                                                |
|                                                                                                                   |                   |                      |                      |                                                     | 3      |                                                                                                    |                                                                                            |                                                                                                |
|                                                                                                                   |                   |                      |                      |                                                     | 4      |                                                                                                    |                                                                                            |                                                                                                |
|                                                                                                                   |                   |                      |                      |                                                     | 5      |                                                                                                    |                                                                                            |                                                                                                |
|                                                                                                                   |                   |                      |                      |                                                     | 6      |                                                                                                    |                                                                                            |                                                                                                |
|                                                                                                                   |                   |                      |                      |                                                     | 7      |                                                                                                    |                                                                                            |                                                                                                |
|                                                                                                                   |                   |                      |                      |                                                     | 8      |                                                                                                    |                                                                                            |                                                                                                |
|                                                                                                                   |                   |                      |                      |                                                     | 9      |                                                                                                    |                                                                                            |                                                                                                |
|                                                                                                                   |                   |                      |                      |                                                     | 10     |                                                                                                    |                                                                                            |                                                                                                |
|                                                                                                                   |                   |                      | 60/7.5"              |                                                     |        | 11                                                                                                 |                                                                                            | GRAY-BROWN SANDY COBBLES WITH CLAY.                                                            |
| Bottom of boring at 11.2 feet.<br>Notes:<br>(1) Severe caving at 8 feet.<br>(2) Free water encountered at 7 feet. |                   |                      |                      |                                                     |        |                                                                                                    |                                                                                            |                                                                                                |
| * Converted to equivalent standard penetration blow counts.<br>** Existing ground surface.                        |                   |                      |                      |                                                     |        |                                                                                                    |                                                                                            |                                                                                                |
| <b>R<sub>G</sub>H</b> Consultants, Inc.                                                                           |                   |                      |                      | Job No: 5310.02.04.2<br>Appr: <i>EC</i><br>Drwn: tl |        | <b>LOG OF BORING B-1</b><br>Vineyard Lodge Expansion<br>830 Pratt Avenue<br>St. Helena, California |                                                                                            | PLATE<br><br><b>3</b>                                                                          |



| Other Laboratory Tests                  | Dry Density (pcf) | Moisture Content (%) | % Passing #200 Sieve | Blows/foot* Sample | DEPTH (FEET)                | EQUIPMENT: <b>Mobile B-53</b>                                                                                                                |                      |
|-----------------------------------------|-------------------|----------------------|----------------------|--------------------|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
|                                         |                   |                      |                      |                    |                             | LOGGED BY: <b>BDM</b>                                                                                                                        | DATE: <b>4-28-08</b> |
|                                         |                   |                      |                      |                    |                             | DRILLER: <b>Pearson Drilling</b>                                                                                                             | ELEVATION: <b>**</b> |
| LL=35; PI=15<br>EI=46                   |                   |                      | 59.7                 | 13                 | 0                           | DARK BROWN SANDY CLAY WITH GRAVEL (CL), stiff, dry, porous, with some bark and gravel throughout and with fine roots in upper 1 foot (Fill). |                      |
|                                         |                   |                      |                      |                    | 1                           |                                                                                                                                              |                      |
| LL=36; PI=18                            |                   |                      |                      | 6                  | 2                           | DARK BROWN SANDY CLAY WITH GRAVEL (CL), medium stiff, dry.                                                                                   |                      |
|                                         |                   |                      |                      |                    | 3                           |                                                                                                                                              |                      |
|                                         |                   |                      |                      |                    | 4                           | BROWN CLAYEY GRAVEL (GC), dense, moist.                                                                                                      |                      |
|                                         |                   |                      |                      |                    | 5                           |                                                                                                                                              |                      |
|                                         |                   |                      |                      |                    | 6                           | MOTTLED YELLOW-BROWN AND OLIVE-GRAY CLAYEY SAND WITH GRAVEL (SC), medium dense to dense, moist, with abundant fine-grained-sand.             |                      |
|                                         |                   |                      |                      |                    | 7                           |                                                                                                                                              |                      |
|                                         |                   |                      |                      |                    | 8                           | YELLOW-BROWN SANDY GRAVEL (GP), dense to very dense, moist to wet; with occasional cobbles.                                                  |                      |
|                                         |                   |                      |                      |                    | 9                           |                                                                                                                                              |                      |
|                                         |                   |                      |                      |                    | 10                          |                                                                                                                                              |                      |
|                                         |                   |                      |                      |                    | 11                          |                                                                                                                                              |                      |
|                                         |                   |                      |                      |                    | 12                          |                                                                                                                                              |                      |
|                                         |                   |                      |                      |                    | 13                          |                                                                                                                                              |                      |
|                                         |                   |                      |                      |                    | 14                          |                                                                                                                                              |                      |
|                                         |                   |                      |                      |                    | 15                          |                                                                                                                                              |                      |
|                                         |                   |                      |                      |                    |                             | Bottom of boring at 15½ feet.                                                                                                                |                      |
|                                         |                   |                      |                      |                    |                             | Notes:                                                                                                                                       |                      |
|                                         |                   |                      |                      |                    |                             | (1) Severe caving at 12 feet.                                                                                                                |                      |
|                                         |                   |                      |                      |                    |                             | (2) Free groundwater encountered at 11½ feet and equilibrated at 7 feet after 3½ hours.                                                      |                      |
|                                         |                   |                      |                      |                    |                             | * Converted to equivalent standard penetration blow counts.                                                                                  |                      |
|                                         |                   |                      |                      |                    |                             | ** Existing ground surface.                                                                                                                  |                      |
| <b>R<sub>G</sub>H</b> Consultants, Inc. |                   |                      |                      |                    | Job No: 5310.02.04.2        | <b>LOG OF BORING B-2</b><br>Vineyard Lodge Expansion<br>830 Pratt Avenue<br>St. Helena, California                                           |                      |
|                                         |                   |                      |                      |                    | Appr: <i>EC</i><br>Drwn: tl |                                                                                                                                              |                      |
|                                         |                   |                      |                      |                    |                             | PLATE                                                                                                                                        |                      |
|                                         |                   |                      |                      |                    |                             | <b>4</b>                                                                                                                                     |                      |

| Other Laboratory Tests                                                                     | Dry Density (pcf) | Moisture Content (%) | % Passing #200 Sieve | Blows/foot* Sample                                  | DEPTH (FEET)                                                                                       | EQUIPMENT: <b>Mobile B-53</b>                                                                                                                |                      |
|--------------------------------------------------------------------------------------------|-------------------|----------------------|----------------------|-----------------------------------------------------|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
|                                                                                            |                   |                      |                      |                                                     |                                                                                                    | LOGGED BY: <b>BDM</b>                                                                                                                        | DATE: <b>4-28-08</b> |
|                                                                                            |                   |                      |                      |                                                     |                                                                                                    | DRILLER: <b>Pearson Drilling</b>                                                                                                             | ELEVATION: <b>**</b> |
|                                                                                            |                   |                      |                      |                                                     | 0                                                                                                  | DARK BROWN SANDY CLAY WITH GRAVEL (CL), stiff, dry, porous, with some bark and gravel throughout and with fine roots in upper 1 foot (Fill). |                      |
|                                                                                            |                   |                      |                      |                                                     | 1                                                                                                  |                                                                                                                                              |                      |
|                                                                                            |                   |                      |                      |                                                     | 2                                                                                                  | DARK BROWN SANDY CLAY WITH GRAVEL (CL), stiff, dry; porous to 3 feet.                                                                        |                      |
|                                                                                            |                   |                      |                      |                                                     | 3                                                                                                  |                                                                                                                                              |                      |
| Tx 852                                                                                     | 91.2              | 15.1                 |                      | 9                                                   | 4                                                                                                  | DARK BROWN SANDY CLAY (CL-CH), stiff, moist.                                                                                                 |                      |
|                                                                                            |                   |                      |                      |                                                     | 5                                                                                                  |                                                                                                                                              |                      |
| Tx 962                                                                                     | 101.9             | 19.5                 |                      | 10                                                  | 6                                                                                                  |                                                                                                                                              |                      |
|                                                                                            |                   |                      |                      |                                                     | 7                                                                                                  |                                                                                                                                              |                      |
|                                                                                            |                   |                      |                      | 15                                                  | 8                                                                                                  | BROWN CLAYEY SAND WITH GRAVEL (SC), medium dense, moist.                                                                                     |                      |
|                                                                                            |                   |                      |                      |                                                     | 9                                                                                                  |                                                                                                                                              |                      |
|                                                                                            |                   |                      |                      |                                                     | 10                                                                                                 | MOTTLED YELLOW-BROWN AND OLIVE-GRAY CLAYEY SAND WITH GRAVEL (SM), medium dense, wet.                                                         |                      |
|                                                                                            |                   |                      |                      |                                                     | 11                                                                                                 |                                                                                                                                              |                      |
|                                                                                            |                   |                      |                      | 18                                                  | 12                                                                                                 |                                                                                                                                              |                      |
|                                                                                            |                   |                      |                      |                                                     | 13                                                                                                 |                                                                                                                                              |                      |
|                                                                                            |                   |                      |                      |                                                     | 14                                                                                                 | YELLOW-BROWN SANDY GRAVEL (GP), dense to very dense, moist to wet; with occasional cobbles.                                                  |                      |
|                                                                                            |                   |                      |                      |                                                     | 15                                                                                                 |                                                                                                                                              |                      |
|                                                                                            |                   |                      |                      | 60                                                  | 16                                                                                                 | GRAY-BROWN SANDY COBBLES WITH CLAY.                                                                                                          |                      |
|                                                                                            |                   |                      |                      |                                                     | 17                                                                                                 |                                                                                                                                              |                      |
|                                                                                            |                   |                      |                      | 58                                                  | 18                                                                                                 |                                                                                                                                              |                      |
| * Converted to equivalent standard penetration blow counts.<br>** Existing ground surface. |                   |                      |                      |                                                     |                                                                                                    | Bottom of boring at 18½ feet.<br>Notes:<br>(1) Severe caving at 8 feet.<br>(2) Free groundwater encountered at 7 feet.                       |                      |
| <b>R<sub>G</sub>H</b> Consultants, Inc.                                                    |                   |                      |                      | Job No: 5310.02.04.2<br>Appr: <i>EC</i><br>Drwn: tl | <b>LOG OF BORING B-3</b><br>Vineyard Lodge Expansion<br>830 Pratt Avenue<br>St. Helena, California | PLATE<br><b>5</b>                                                                                                                            |                      |



| Other Laboratory Tests | Dry Density (pcf) | Moisture Content (%) | % Passing #200 Sieve | Blows/foot*<br>Sample | DEPTH (FEET) | EQUIPMENT: <b>Mobile B-53</b><br>LOGGED BY: <b>BDM</b> DATE: <b>4-28-08</b><br>DRILLER: <b>Pearson Drilling</b> ELEVATION: <b>**</b>                                                                                                           |
|------------------------|-------------------|----------------------|----------------------|-----------------------|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                        |                   |                      |                      |                       | 0            | <b>DARK BROWN SANDY CLAY WITH GRAVEL (CL),</b><br>stiff, dry, porous, with some bark and gravel throughout and with fine roots (Fill).<br><b>DARK BROWN SANDY CLAY WITH GRAVEL (CL),</b><br>medium stiff to stiff, dry; porous to 2 to 3 feet. |
|                        |                   |                      |                      |                       | 1            |                                                                                                                                                                                                                                                |
|                        |                   |                      |                      |                       | 2            |                                                                                                                                                                                                                                                |
|                        |                   |                      |                      | 9                     | 3            |                                                                                                                                                                                                                                                |
|                        |                   |                      |                      |                       | 4            |                                                                                                                                                                                                                                                |
|                        |                   |                      |                      | 12                    | 5            | Bottom of boring at 5½ feet.<br>Notes:<br>(1) No caving.<br>(2) No free groundwater encountered.                                                                                                                                               |
|                        |                   |                      |                      |                       |              |                                                                                                                                                                                                                                                |

\* Converted to equivalent standard penetration blow counts.  
 \*\* Existing ground surface.

|                                                                                                            |                                                                       |                                                                                                    |                       |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------|
| <div style="font-size: 2em; font-weight: bold; margin-bottom: 5px;">R<sub>G</sub>H</div> Consultants, Inc. | Job No: 5310.02.04.2<br>Appr: <i>EC</i><br>Drwn: tl<br>Date: May 2008 | <b>LOG OF BORING B-5</b><br>Vineyard Lodge Expansion<br>830 Pratt Avenue<br>St. Helena, California | PLATE<br><br><b>7</b> |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------|

| Other Laboratory Tests                                                                                                 | Dry Density (pcf) | Moisture Content (%) | % Passing #200 Sieve | Blows/foot* | Sample | DEPTH (FEET) | EQUIPMENT: <b>Mobile B-53</b><br>LOGGED BY: <b>BDM</b> DATE: <b>4-28-08</b><br>DRILLER: <b>Pearson Drilling</b> ELEVATION: <b>**</b> |
|------------------------------------------------------------------------------------------------------------------------|-------------------|----------------------|----------------------|-------------|--------|--------------|--------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                        |                   |                      |                      |             |        | 0            | DARK BROWN SANDY CLAY WITH GRAVEL (CL), medium stiff, dry; porous with fine roots in upper 1 foot.                                   |
|                                                                                                                        |                   |                      |                      |             |        | 1            |                                                                                                                                      |
|                                                                                                                        |                   |                      |                      |             |        | 2            |                                                                                                                                      |
|                                                                                                                        |                   |                      |                      |             |        | 3            |                                                                                                                                      |
|                                                                                                                        |                   |                      |                      |             |        | 4            |                                                                                                                                      |
|                                                                                                                        |                   |                      |                      | 7           |        | 5            | BROWN CLAYEY SAND WITH GRAVEL (SC), medium dense, moist.                                                                             |
|                                                                                                                        |                   |                      |                      |             |        | 6            |                                                                                                                                      |
|                                                                                                                        |                   |                      |                      |             |        | 7            |                                                                                                                                      |
|                                                                                                                        |                   |                      |                      |             |        | 8            |                                                                                                                                      |
|                                                                                                                        |                   |                      |                      |             |        | 9            |                                                                                                                                      |
|                                                                                                                        |                   |                      |                      |             |        | 10           | GRAY-BROWN SANDY COBBLES WITH CLAY.                                                                                                  |
|                                                                                                                        |                   |                      |                      | 34          |        | 11           |                                                                                                                                      |
| Bottom of boring at 11 feet.<br>Notes:<br>(1) Severe caving at 8 feet.<br>(2) Free groundwater encountered at 7½ feet. |                   |                      |                      |             |        |              |                                                                                                                                      |
| * Converted to equivalent standard penetration blow counts.<br>** Existing ground surface.                             |                   |                      |                      |             |        |              |                                                                                                                                      |

|                                                                                                                                                            |                                                             |                                                                                                    |                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| <div style="display: flex; align-items: center;"> <div style="font-size: 2em; margin-right: 10px;">R<br/>G<br/>H</div> <div>Consultants, Inc.</div> </div> | Job No: 5310.02.04.2<br><br>Appr: <i>EC</i><br><br>Drwn: tl | <b>LOG OF BORING B-6</b><br>Vineyard Lodge Expansion<br>830 Pratt Avenue<br>St. Helena, California | PLATE<br><br><div style="font-size: 1.5em; font-weight: bold;">8</div> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|

| UNIFIED SOIL CLASSIFICATION SYSTEM                                                     | MAJOR DIVISIONS                                                                         |                                                                                           | SYMBOLS                                      |                                                                     | TYPICAL DESCRIPTIONS                                                                                                |                                                                |
|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|----------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
|                                                                                        |                                                                                         |                                                                                           | GRAPH                                        | LETTER                                                              |                                                                                                                     |                                                                |
|                                                                                        | COARSE GRAINED SOILS<br><br>MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE | GRAVEL AND GRAVELLY SOILS<br><br>MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE | CLEAN GRAVEL<br><br>(LITTLE OR NO FINES)     |                                                                     | GW                                                                                                                  | WELL-GRADED GRAVEL, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES   |
|                                                                                        |                                                                                         |                                                                                           |                                              |                                                                     | GP                                                                                                                  | POORLY-GRADED GRAVEL, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES |
|                                                                                        |                                                                                         |                                                                                           | GRAVEL WITH FINES<br><br>(OVER 12% OF FINES) |                                                                     | GM                                                                                                                  | SILTY GRAVEL, POORLY GRADED GRAVEL-SAND-SILT MIXTURES          |
|                                                                                        |                                                                                         |                                                                                           |                                              |                                                                     | GC                                                                                                                  | CLAYEY GRAVEL, POORLY GRADED GRAVEL-SAND-CLAY MIXTURES         |
|                                                                                        |                                                                                         | SAND AND SANDY SOILS<br><br>MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE       | CLEAN SANDS<br><br>(LITTLE OR NO FINES)      |                                                                     | SW                                                                                                                  | WELL-GRADED SAND, GRAVELLY SAND, LITTLE OR NO FINES            |
|                                                                                        |                                                                                         |                                                                                           |                                              |                                                                     | SP                                                                                                                  | POORLY-GRADED SAND, GRAVELLY SAND, LITTLE OR NO FINES          |
|                                                                                        |                                                                                         |                                                                                           | SANDS WITH FINES<br><br>(OVER 12% OF FINES)  |                                                                     | SM                                                                                                                  | SILTY SANDS, POORLY GRADED SAND-SILT MIXTURES                  |
|                                                                                        |                                                                                         |                                                                                           |                                              |                                                                     | SC                                                                                                                  | CLAYEY SANDS, POORLY GRADED SAND-CLAY MIXTURES                 |
| FINE GRAINED SOILS<br><br>MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE | SILTS AND CLAYS<br>LIQUID LIMIT LESS THAN 50                                            |                                                                                           |                                              | ML                                                                  | INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS, OR CLAYEY SILTS WITH SLIGHT PLASTICITY |                                                                |
|                                                                                        |                                                                                         |                                                                                           |                                              | CL                                                                  | INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS                   |                                                                |
|                                                                                        |                                                                                         |                                                                                           |                                              | OL                                                                  | ORGANIC CLAYS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY                                                             |                                                                |
|                                                                                        | SILTS AND CLAYS<br>LIQUID LIMIT GREATER THAN 50                                         |                                                                                           |                                              | MH                                                                  | ORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS                                   |                                                                |
|                                                                                        |                                                                                         |                                                                                           |                                              | CH                                                                  | INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS                                                                       |                                                                |
|                                                                                        |                                                                                         |                                                                                           |                                              | OH                                                                  | ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS                                                           |                                                                |
| HIGHLY ORGANIC SOILS                                                                   |                                                                                         |                                                                                           | PT                                           | PEAT, HUMUS, SWAMP SOILS AND OTHER SOILS WITH HIGH ORGANIC-CONTENTS |                                                                                                                     |                                                                |

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

## KEY TO TEST DATA

## Consol - Consolidation

LL - Liquid Limit (in %)

PL - Plastic Limit (in %)

Gs - Specific Gravity

SA - Sieve Analysis

■ - "Undisturbed" Samples

☒ - Bulk or Disturbed Sample

■ - Standard Penetration Test

□ - Sample Attempt With No Recovery

## Shear Strength, psf

Tx 320 (2600)

TxCU 320 (2600)

DS 2750 (2600)

UC 2000

FVS 470

LVS 700

SS - Shrink Swell

EXP - Expansion

P - Permeability

## Confining Pressure, psf

- Unconsolidated Undrained Triaxial

- Consolidated Undrained Triaxial

- Consolidated Drained Direct Shear

- Unconfined Compression

- Field Vane Shear

- Laboratory Vane Shear

Note: All strength tests on 2.8-in. or 2.4-in. diameter sample, unless otherwise indicated.

R<sub>G</sub>H Consultants, Inc.

Job No: 5310.02.04.2

Appr: EC

Drwn: tl

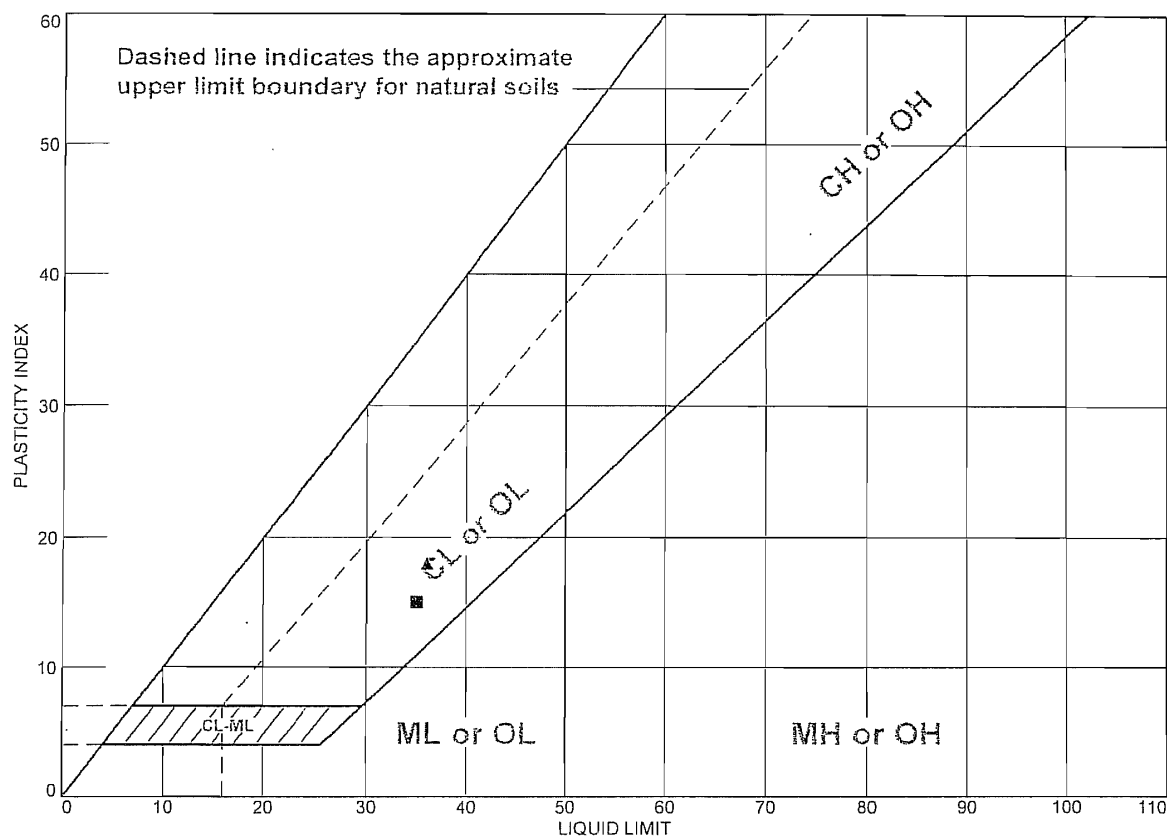
Date: May 2008

SOIL CLASSIFICATION CHART  
AND KEY TO TEST DATAVineyard Lodge Expansion  
830 Pratt Avenue  
St. Helena, California

PLATE

9

# LIQUID AND PLASTIC LIMITS TEST REPORT



|   | MATERIAL DESCRIPTION            | LL | PL | PI | %<#40 | %<#200 | USCS |
|---|---------------------------------|----|----|----|-------|--------|------|
| ● | Brown Sandy Lean Clay (CL)      | 35 | 20 | 15 | 83.8  | 60.9   | CL   |
| ■ | Brown Sandy Lean Clay (CL)      | 35 | 20 | 15 | 80.9  | 59.7   | CL   |
| ▲ | Dark Brown Sandy Lean Clay (CL) | 36 | 18 | 18 |       |        | CL   |
|   |                                 |    |    |    |       |        |      |
|   |                                 |    |    |    |       |        |      |

Project No. 5310.2.4.2 Client: RGH Consultants

Project: Vineyard Lodge Expansion, St. Helena

● Source of Sample: B-1 Depth: 1.0-1.5'  
 ■ Source of Sample: B-2 Depth: 1.5-2.0'  
 ▲ Source of Sample: B-2 Depth: 4.0'

## Remarks:

- Expansion Index= 52 (Medium)
- Expansion Index= 46 (Low)

R G H CONSULTANTS, INC.

Plate

Job No: 5310.02.04.2

Appr: *EC*

Drwn: tl

Date: May 2008

## CLASSIFICATION TEST DATA

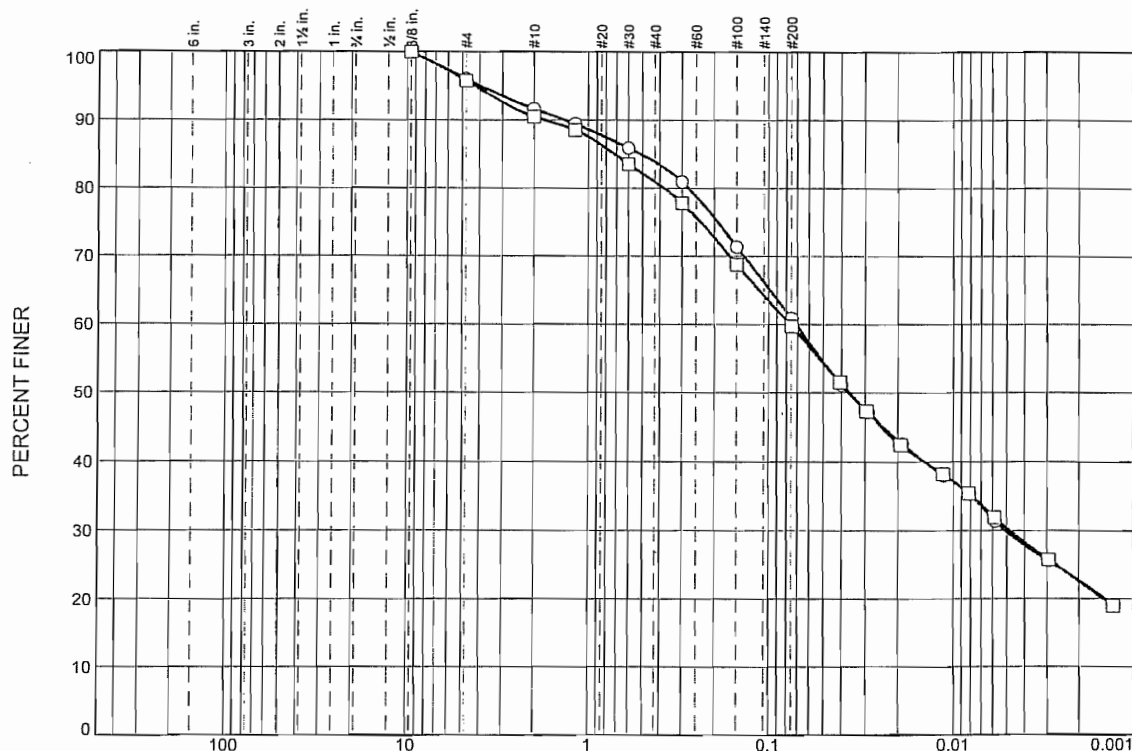
Vineyard Lodge Expansion  
 830 Pratt Avenue  
 St. Helena, California

PLATE

10

R G H Consultants, Inc.

# Particle Size Distribution Report



GRAIN SIZE - mm.

|   | % +3" | % Gravel |      | % Sand |        |      | % Fines |      |
|---|-------|----------|------|--------|--------|------|---------|------|
|   |       | Coarse   | Fine | Coarse | Medium | Fine | Silt    | Clay |
| ○ | 0.0   | 0.0      | 4.0  | 4.4    | 7.8    | 22.9 | 31.2    | 29.7 |
| □ | 0.0   | 0.0      | 4.3  | 5.2    | 9.6    | 21.2 | 29.4    | 30.3 |
|   |       |          |      |        |        |      |         |      |
|   |       |          |      |        |        |      |         |      |

## SOIL DATA

| SYMBOL | SOURCE | SAMPLE NO. | DEPTH (ft.) | Material Description       | USCS |
|--------|--------|------------|-------------|----------------------------|------|
| ○      | B-1    |            | 1.0-1.5'    | Brown Sandy Lean Clay (CL) | CL   |
| □      | B-2    |            | 1.5-2.0'    | Brown Sandy Lean Clay (CL) | CL   |
|        |        |            |             |                            |      |
|        |        |            |             |                            |      |
|        |        |            |             |                            |      |

**R G H** CONSULTANTS, INC.

Client: RGH Consultants

Project: Vineyard Lodge Expansion, St. Helena

Project No.: 5310.2.4.2

Plate

**R G H** Consultants, Inc.

Job No: 5310.02.04.2

Appr: *EC*

Drwn: tl

Date: May 2008

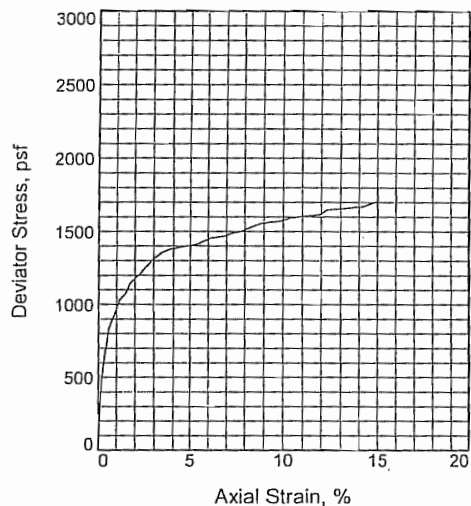
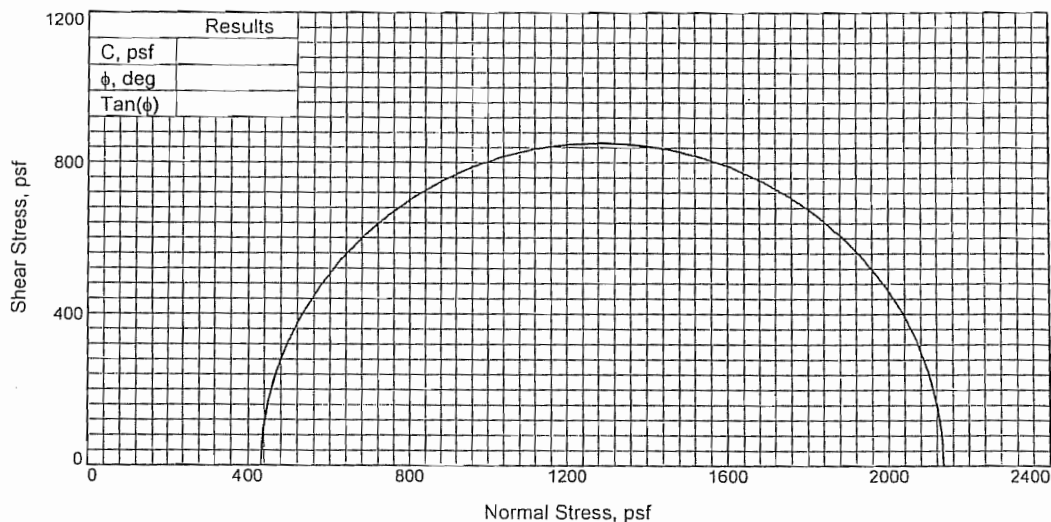
## PARTICLE SIZE ANALYSIS

Vineyard Lodge Expansion  
830 Pratt Avenue  
St. Helena, California

PLATE

11





| Sample No.              |                  | 1      |
|-------------------------|------------------|--------|
| Initial                 | Water Content, % | 15.1   |
|                         | Dry Density, pcf | 91.2   |
|                         | Saturation, %    | 48.0   |
|                         | Void Ratio       | 0.8484 |
|                         | Diameter, in.    | 2.390  |
|                         | Height, in.      | 5.200  |
| At Test                 | Water Content, % | 15.1   |
|                         | Dry Density, pcf | 91.2   |
|                         | Saturation, %    | 48.0   |
|                         | Void Ratio       | 0.8484 |
|                         | Diameter, in.    | 2.390  |
|                         | Height, in.      | 5.200  |
| Strain rate, in./min.   |                  | 0.060  |
| Back Pressure, psf      |                  | 0.0    |
| Cell Pressure, psf      |                  | 432.0  |
| Fail. Stress, psf       |                  | 1704.3 |
| Strain, %               |                  | 15.0   |
| Ult. Stress, psf        |                  | 1704.3 |
| Strain, %               |                  |        |
| $\sigma_1$ Failure, psf |                  | 2136.3 |
| $\sigma_3$ Failure, psf |                  | 432.0  |

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** Undisturbed

**Description:** Dark Brown Fat Clay W/Sand And Gravel (CH)

**Assumed Specific Gravity=** 2.70

**Remarks:**

**Client:** RGH Consultants

**Project:** Vineyard Lodge Expansion, St. Helena

**Source of Sample:** B-3      **Depth:** 3.0'

**Proj. No.:** 5310.2.4.2

**Date Sampled:** 5-2-08

**R G H CONSULTANTS, INC.**

Plate \_\_\_\_\_

**R G H Consultants, Inc.**

Job No: 5310.02.04.2

Appr: *EC*

Drwn: tl

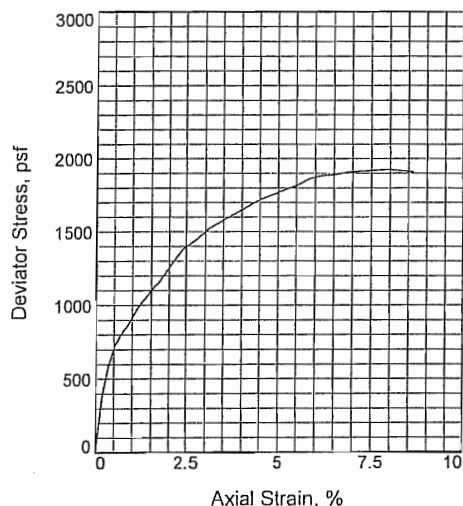
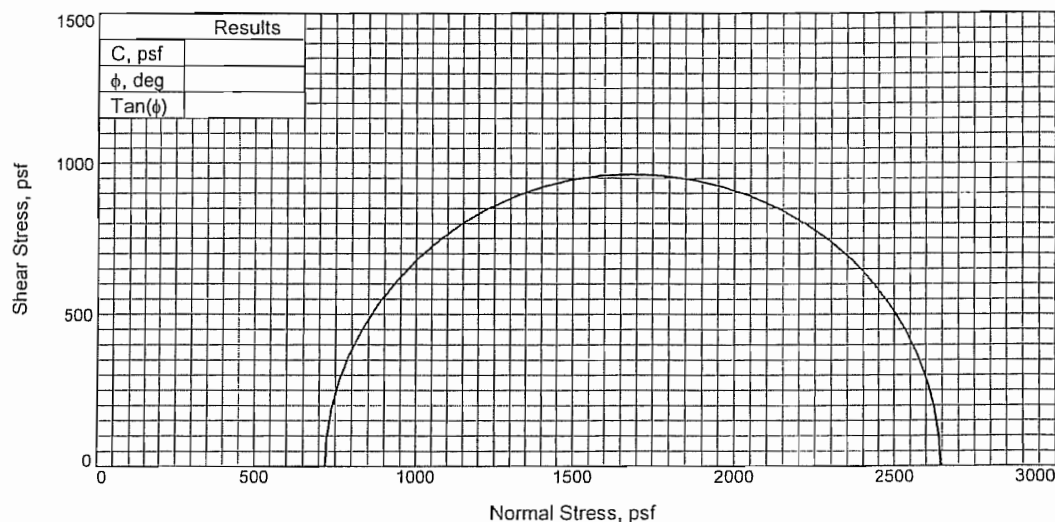
Date: May 2008

**TRIAXIAL TEST DATA**

Vineyard Lodge Expansion  
830 Pratt Avenue  
St. Helena, California

PLATE

**12**



|                                |                        |
|--------------------------------|------------------------|
| Sample No. 1                   |                        |
| Initial                        | Water Content, % 19.5  |
|                                | Dry Density, pcf 101.9 |
|                                | Saturation, % 80.4     |
|                                | Void Ratio 0.6538      |
|                                | Diameter, in. 2.430    |
|                                | Height, in. 5.800      |
| At Test                        | Water Content, % 19.5  |
|                                | Dry Density, pcf 101.9 |
|                                | Saturation, % 80.4     |
|                                | Void Ratio 0.6538      |
|                                | Diameter, in. 2.430    |
|                                | Height, in. 5.800      |
| Strain rate, in./min. 0.060    |                        |
| Back Pressure, psf 0.0         |                        |
| Cell Pressure, psf 720.0       |                        |
| Fail. Stress, psf 1925.3       |                        |
| Strain, % 7.9                  |                        |
| Ult. Stress, psf 1925.3        |                        |
| Strain, %                      |                        |
| $\sigma_1$ Failure, psf 2645.3 |                        |
| $\sigma_3$ Failure, psf 720.0  |                        |

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** Undisturbed

**Description:** Dark Brown Fat Clay W/Sand (CH)

Assumed Specific Gravity= 2.70

Remarks:

**Client:** RGH Consultants

**Project:** Vineyard Lodge Expansion, St. Helena

**Source of Sample:** B-3 **Depth:** 5.0'

**Proj. No.:** 5310.2.4.2

**Date Sampled:** 5-2-08

**RGH CONSULTANTS, INC.**

Plate

**RGH Consultants, Inc.**

Job No: 5310.02.04.2

Appr: *EC*

Drwn: tl

Date: May 2008

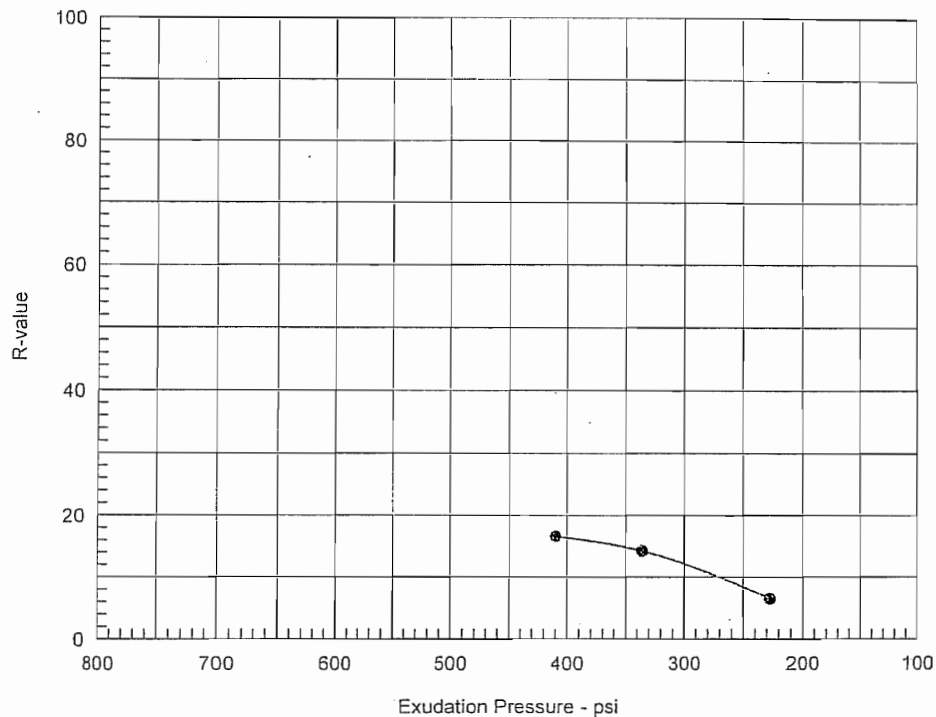
**TRIAXIAL TEST DATA**

Vineyard Lodge Expansion  
830 Pratt Avenue  
St. Helena, California

PLATE

**13**

# R-VALUE TEST REPORT



Resistance R-Value and Expansion Pressure - Cal Test 301

| No. | Compact.<br>Pressure<br>psi | Density<br>pcf | Moist.<br>% | Expansion<br>Pressure<br>psf | Horizontal<br>Press. psi<br>@ 160 psi | Sample<br>Height<br>in. | Exud.<br>Pressure<br>psi | R<br>Value | R<br>Value<br>Corr. |
|-----|-----------------------------|----------------|-------------|------------------------------|---------------------------------------|-------------------------|--------------------------|------------|---------------------|
| 1   | 75                          | 105.7          | 19.8        | 0                            | 142                                   | 2.42                    | 228                      | 7          | 7                   |
| 2   | 125                         | 109.7          | 18.5        | 0                            | 130                                   | 2.60                    | 336                      | 13         | 14                  |
| 3   | 130                         | 113.2          | 17.1        | 0                            | 124                                   | 2.48                    | 410                      | 17         | 17                  |

## Test Results

## Material Description

R-value at 300 psi exudation pressure = 12

Brown Sandy Lean Clay W/Gravel (CL)

Project No.: 5310.2.4.2

Project: Vineyard Lodge Expansion, St. Helena

Source of Sample: B-5

Depth: 0.0'

Sample Number: Bulk A

Date: 5/7/2008

Tested by: CA

Checked by: TMc

Remarks:

R-VALUE TEST REPORT  
RGH CONSULTANTS, INC.

Plate \_\_\_\_\_

**RGH** Consultants, Inc.

Job No: 5310.02.04.2

Appr: *EL*

Drwn: TL

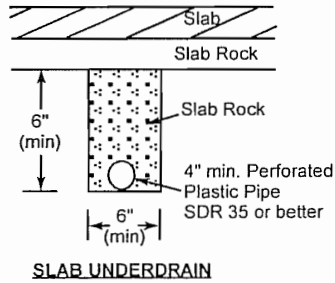
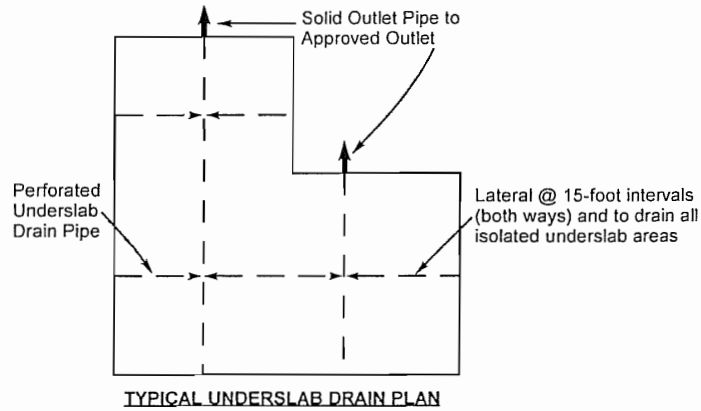
Date: May 2008

## RESISTANCE (R) VALUE DATA

Vineyard Lodge Expansion  
830 Pratt Avenue  
St. Helena, California

PLATE

14



**R<sub>G</sub>H** Consultants, Inc.

Job No: 5310.02.04.2

Appr: *EC*

Drwn: tl

Date: May 2008

**TYPICAL SUBDRAIN DETAILS ILLUSTRATION**

Vineyard Lodge Expansion  
830 Pratt Avenue  
St. Helena, California

PLATE

**15**

**Appendix B**

## **APPENDIX B - REFERENCES**

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Geotechnical Study Report  
May 16, 2008

*RGH Consultants, Inc.*

Vineyard Lodge Expansion  
Project Number: 5310.02.04.2

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Youd, T.L., and Idriss, I.M., and 19 others, 2001, Liquefaction Resistance of Soils: summary report from the 1996 NCEER and 1998 NCEER/NSF workshops on evaluation of liquefaction resistance of soils: ASCE Geotechnical and Geoenvironmental Journal, v. 127, no. 10, p. 817-833.

Geotechnical Study Report  
May 16, 2008

*RGH Consultants, Inc.*

Vineyard Lodge Expansion  
Project Number: 5310.02.04.2

### APPENDIX C - DISTRIBUTION

Culinary Institute of America (2,0)  
c/o Healthy Buildings USA  
Attn: Bob Massaro  
100A Coombs Street  
Napa, CA 94559

ZFA Structural Engineers (1,0)  
Attn: Dennis Fagent  
1212 Fourth Street, Suite Z  
Santa Rosa, CA 95404

Valley Architects (4[wet-signed],0)  
Attn: Rob Anglin  
1560 Railroad Avenue  
St. Helena, CA 94574

Summit Engineering, Inc (1,0)  
Attn: Richard Dinges  
463 Aviation Boulevard, Suite 200  
Santa Rosa, CA 95403

ZAC Landscape Architect (1,0)  
Attn: Sandy Reed  
1574 Skillman Lane  
Petaluma, CA 94952

BDM:EGC:bdm:lw

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s:\project files\5251-5500\5310.02.04.2 vineyard lodge expansion\gs report.doc



# Important Information About Your Geotechnical Engineering Report

*Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.*

*The following information is provided to help you manage your risks.*

## Geotechnical Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical engineering study conducted for a civil engineer may not fulfill the needs of a construction contractor or even another civil engineer. Because each geotechnical engineering study is unique, each geotechnical engineering report is unique, prepared *solely* for the client. No one except you should rely on your geotechnical engineering report without first conferring with the geotechnical engineer who prepared it. *And no one — not even you — should apply the report for any purpose or project except the one originally contemplated.*

## Read the Full Report

Serious problems have occurred because those relying on a geotechnical engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

## A Geotechnical Engineering Report Is Based on A Unique Set of Project-Specific Factors

Geotechnical engineers consider a number of unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, do not rely on a geotechnical engineering report that was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical engineering report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light industrial plant to a refrigerated warehouse,

- elevation, configuration, location, orientation, or weight of the proposed structure,
- composition of the design team, or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes—even minor ones—and request an assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

## Subsurface Conditions Can Change

A geotechnical engineering report is based on conditions that existed at the time the study was performed. *Do not rely on a geotechnical engineering report* whose adequacy may have been affected by: the passage of time; by man-made events, such as construction on or adjacent to the site; or by natural events, such as floods, earthquakes, or groundwater fluctuations. *Always* contact the geotechnical engineer before applying the report to determine if it is still reliable. A minor amount of additional testing or analysis could prevent major problems.

## Most Geotechnical Findings Are Professional Opinions

Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ—sometimes significantly—from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide construction observation is the most effective method of managing the risks associated with unanticipated conditions.

## A Report's Recommendations Are *Not* Final

Do not overrely on the construction recommendations included in your report. *Those recommendations are not final*, because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations only by observing actual

subsurface conditions revealed during construction. *The geotechnical engineer who developed your report cannot assume responsibility or liability for the report's recommendations if that engineer does not perform construction observation.*

### **A Geotechnical Engineering Report Is Subject to Misinterpretation**

Other design team members' misinterpretation of geotechnical engineering reports has resulted in costly problems. Lower that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Contractors can also misinterpret a geotechnical engineering report. Reduce that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing construction observation.

### **Do Not Redraw the Engineer's Logs**

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, *but recognize that separating logs from the report can elevate risk.*

### **Give Contractors a Complete Report and Guidance**

Some owners and design professionals mistakenly believe they can make contractors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give contractors the complete geotechnical engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise contractors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure contractors have sufficient time to perform additional study.* Only then might you be in a position to give contractors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.

### **Read Responsibility Provisions Closely**

Some clients, design professionals, and contractors do not recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that

have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations" many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

### **Geoenvironmental Concerns Are Not Covered**

The equipment, techniques, and personnel used to perform a *geoenvironmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical engineering report does not usually relate any geoenvironmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own geoenvironmental information, ask your geotechnical consultant for risk management guidance. *Do not rely on an environmental report prepared for someone else.*

### **Obtain Professional Assistance To Deal with Mold**

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts of mold from growing on indoor surfaces. To be effective, all such strategies should be devised for the *express purpose* of mold prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional mold prevention consultant. Because just a small amount of water or moisture can lead to the development of severe mold infestations, a number of mold prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may have been addressed as part of the geotechnical engineering study whose findings are conveyed in this report, the geotechnical engineer in charge of this project is not a mold prevention consultant; *none of the services performed in connection with the geotechnical engineer's study were designed or conducted for the purpose of mold prevention. Proper implementation of the recommendations conveyed in this report will not of itself be sufficient to prevent mold from growing in or on the structure involved.*

### **Rely on Your ASFE-Member Geotechnical Engineer for Additional Assistance**

Membership in ASFE/The Best People on Earth exposes geotechnical engineers to a wide array of risk management techniques that can be of genuine benefit for everyone involved with a construction project. Confer with you ASFE-member geotechnical engineer for more information.



8811 Colesville Road/Suite G106, Silver Spring, MD 20910  
Telephone: 301/565-2733 Facsimile: 301/589-2017  
e-mail: info@asfe.org www.asfe.org

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IGER06045.0M







# THE CULINARY INSTITUTE OF AMERICA AT GREYSTONE

2555 MAIN STREET  
ST. HELENA, CALIFORNIA

USE PERMIT AND DESIGN REVIEW SUBMITTAL

PROJECT TEAM

CLIENT  
CULINARY INSTITUTE OF AMERICA  
2555 MAIN STREET  
ST. HELENA, CA 94574

ARCHITECT  
ARCHITECTURAL RESOURCES GROUP, INC.  
PIER 9, THE EMBARCADERO, SUITE 107  
SAN FRANCISCO, CA 94111

MECHANICAL / PLUMBING ENGINEER  
THE ENGINEERING PARTNERSHIP  
100 BUSH CREEK ROAD, SUITE 204  
SANTA ROSA, CA 95404

CIVIL ENGINEER  
SUMMIT ENGINEERING, INC.  
463 AVIATION BLVD, STE 200  
SANTA ROSA, CA 95403

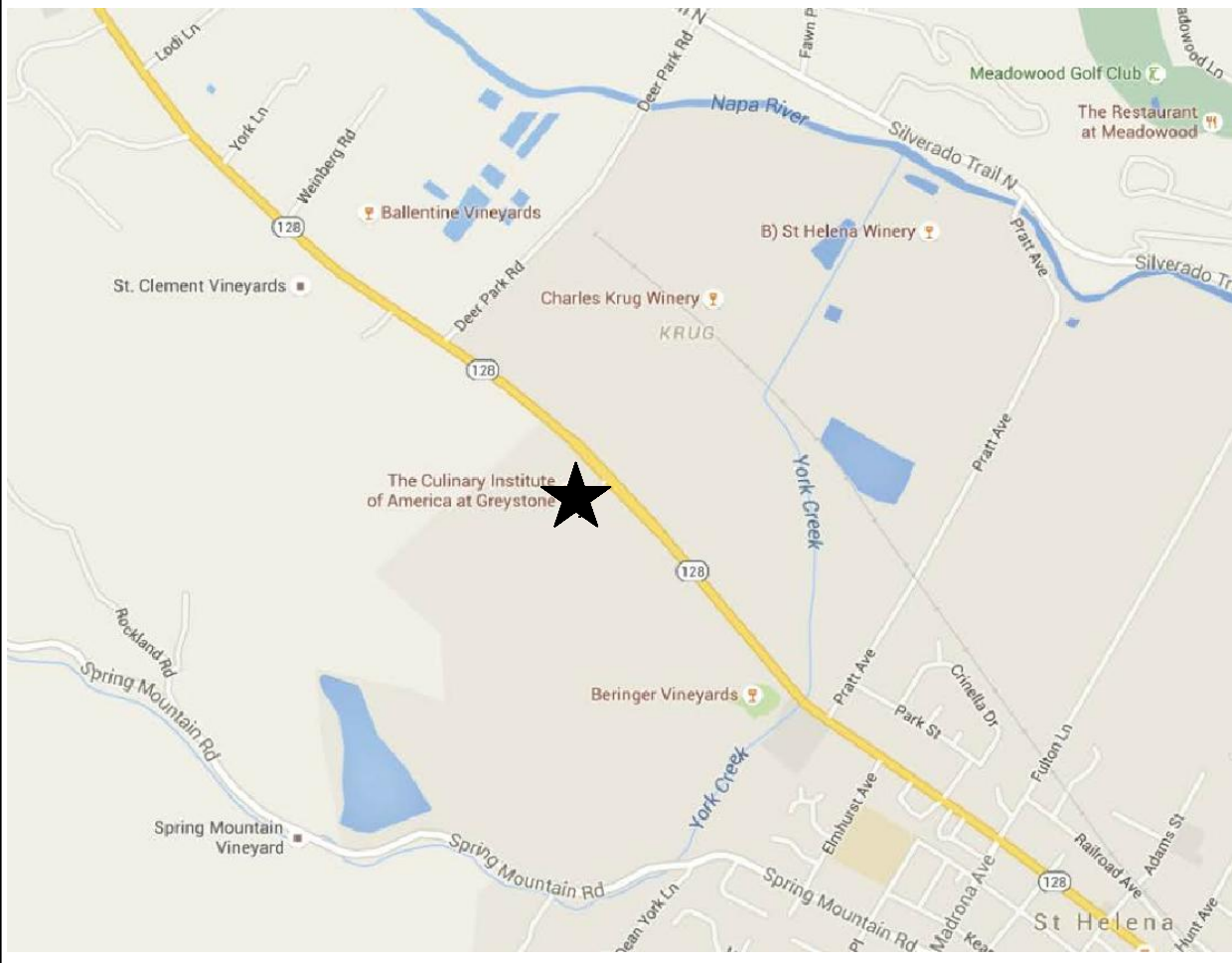
INDEX OF DRAWINGS

TITLESHEETS  
T1.0 COVER SHEET  
T1.1 MAP OF EASEMENTS

CIVIL  
C-1 UTILITY PLAN  
C-2 UTILITY PLAN - ENLARGED SOUTH  
C-3 UTILITY PLAN - ENLARGED NORTH

ARCHITECTURAL  
A1.0 SITE PLAN  
A1.0-A SITE PHOTOS  
A1.0-B SITE PHOTOS CONTINUED  
A1.1 FIRST FLOOR PLAN - EXISTING  
A1.2 SECOND FLOOR PLAN - EXISTING  
A1.3 THIRD FLOOR PLAN - EXISTING  
A2.1 FIRST FLOOR PLAN - PROPOSED  
A2.1a FIRST FLOOR ENLARGED PLAN - PROPOSED  
A2.2 SECOND FLOOR PLAN - PROPOSED  
A2.3 THIRD FLOOR PLAN - PROPOSED  
A2.4 ROOF PLAN  
A3.0 ELEVATIONS - EXISTING  
A3.1 ELEVATIONS - PROPOSED  
A3.2 SECTIONS

PROJECT LOCATION



PLOT PLAN



Architectural  
Resources Group

Pier 9, The Embarcadero, Suite 107  
San Francisco, California 94111  
415 421 1680

[argsf.com](http://argsf.com)

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| REVISIONS |              |          |

## THE CULINARY INSTITUTE OF AMERICA

AT GREYSTONE  
2555 MAIN STREET  
ST. HELENA, CALIFORNIA

SHEET TITLE  
COVER SHEET

USE PERMIT AND DESIGN REVIEW  
SUBMITTAL  
06/21/2016

PROJ NO.  
11208.01

DRAWN  
ZY

CHECKED  
NM

DRAWING NO.

T1.0  
SHEET OF



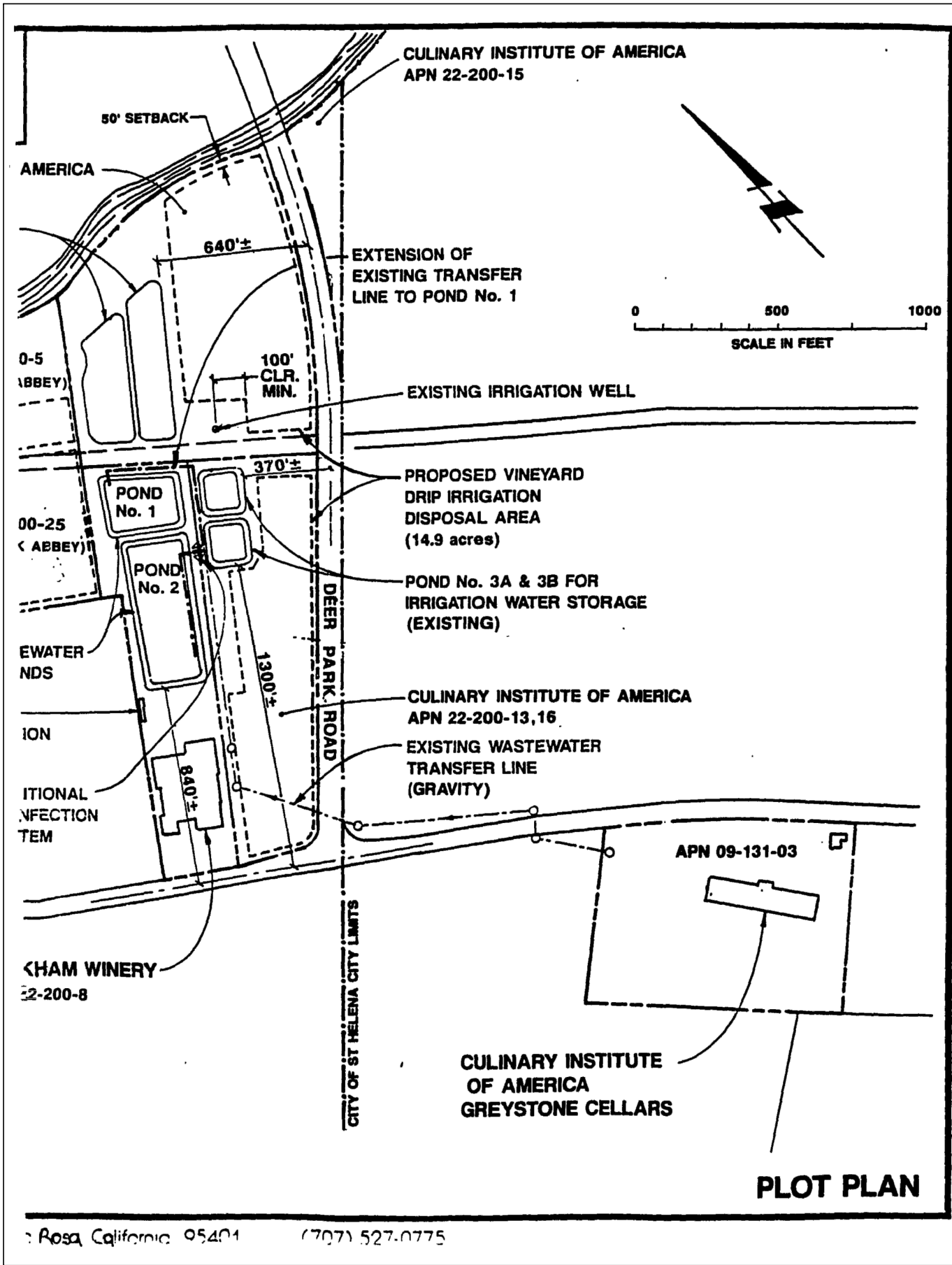
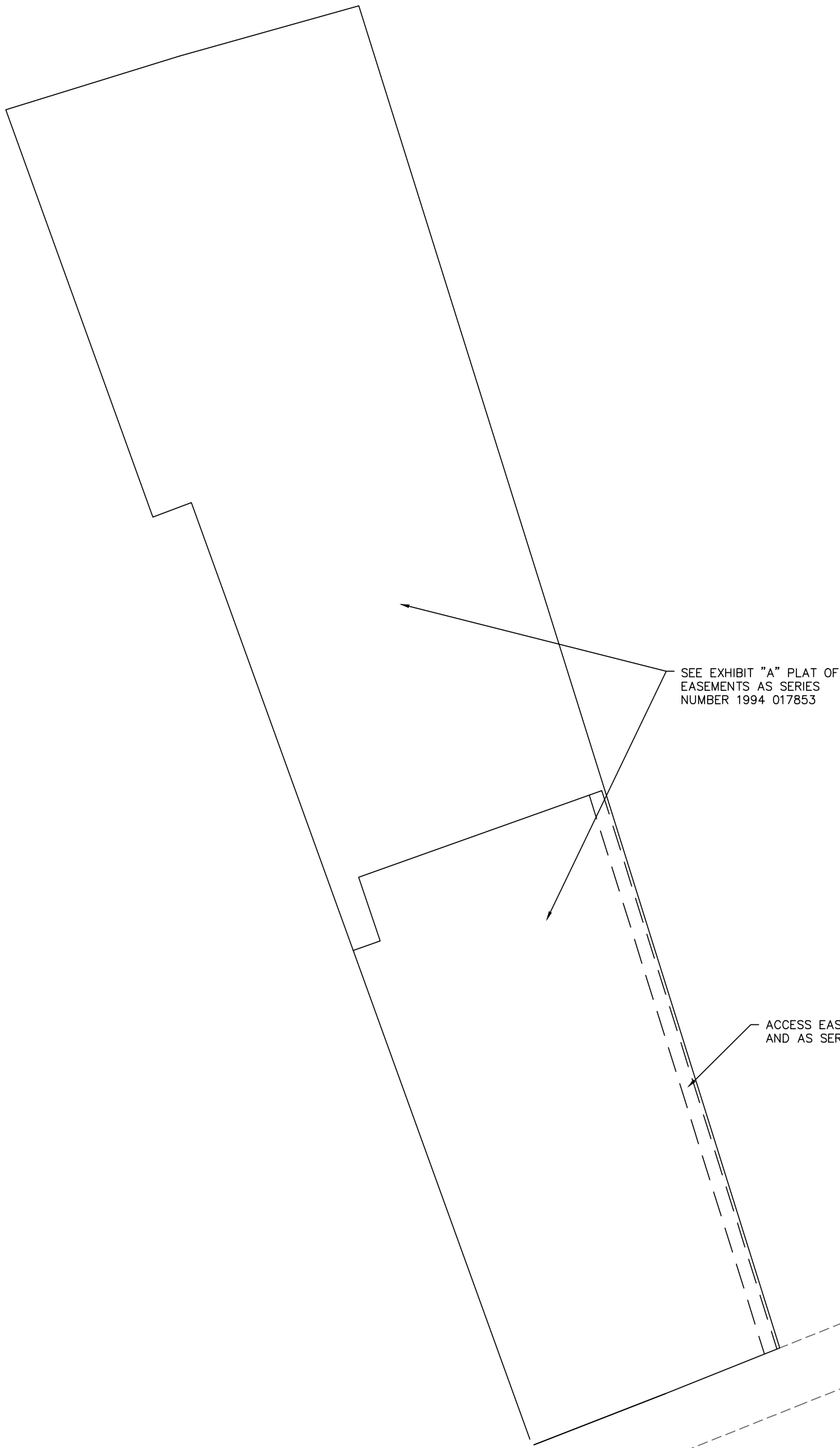
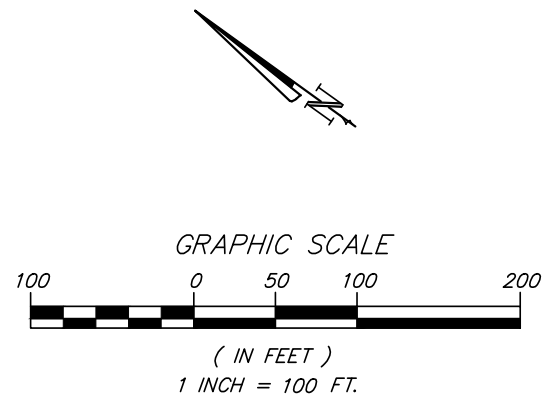


EXHIBIT "A"  
PLAT OF EASEMENTS AS SERIES NUMBER 1994 017853

  
**ALBION SURVEYS, INC.**  
CONSULTING LAND SURVEYORS  
1113 HUNT AVENUE,  
ST. HELENA, CA 94574  
(707) 963-1217  
FAX (707) 963-1829

DRAWING NOTES

THIS MAP IS NOT A BOUNDARY SURVEY.  
IT IS PROVIDED TO LOCATE THE PROPOSED SUBJECT PROPERTY  
IN RELATION TO ADJOINING LANDS, HIGHWAYS, ROADS,  
STREETS AND NOT TO GUARANTEE ANY FIXED  
DIMENSION OR AREA.  
A FIELD SURVEY SHOULD BE PERFORMED PRIOR TO ANY  
CRITICAL DESIGN WORK, CONSTRUCTION OR CONVEYANCE.  
EASEMENTS MAY AFFECT THIS PROPERTY.  
THIS SURVEYOR HAS NOT PROVIDED ANY INFORMATION  
REGARDING EASEMENTS BY THE OWNER.

SITE INFORMATION

APN: 009-131-003  
ADDRESS: 2555 MAIN STREET  
SAINT HELENA, CA

MAP OF EASEMENTS  
OF A PORTION OF THE LANDS OF  
**CULINARY INSTITUTE OF AMERICA**  
COUNTY OF NAPA STATE OF CALIFORNIA

REVISIONS & ADDITIONS

|                   |         |           |
|-------------------|---------|-----------|
| DATE: 5/15/16     | FB: 748 | PG: 45-74 |
| DRAFTER: M. WICKS |         |           |
| DATE:             | FB:     | PG:       |
| DRAFTER:          |         |           |
| DATE:             | FB:     | PG:       |
| DRAFTER:          |         |           |
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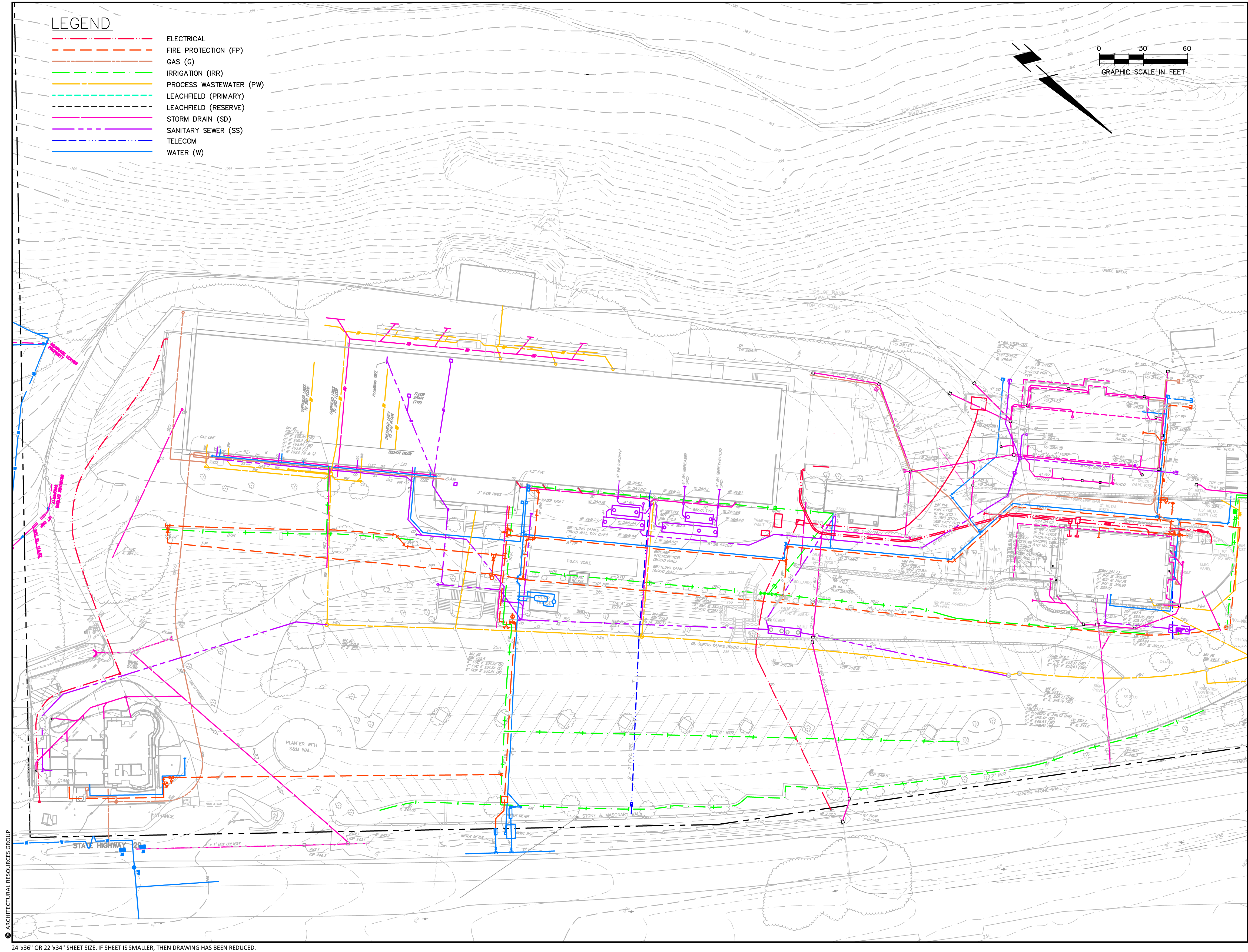
ALBION REFERENCES

PROJECT NO: 1071  
PROJECT MANAGER: J. SULLIVAN  
DATE OF SURVEY: 04/18/16

CONTOUR INTERVAL = 1'  
VERTICAL DATUM BASED ON  
NAVD '88  
HORIZONTAL DATUM BASED ON  
NAD '83  
PER TRIMBLE GPS OBSERVATIONS USING  
OPUS SOLUTION

SHEET 1 OF 5  
C3D PROJECT 1071  
1071\_ESMT.dwg





24"x36" OR 22"x34" SHEET SIZE. IF SHEET IS SMALLER, THEN DRAWING HAS BEEN REDUCED.



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SHEET TITLE  
UTILITY PLAN

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SUBMITTAL

06/21/2016

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11208.01

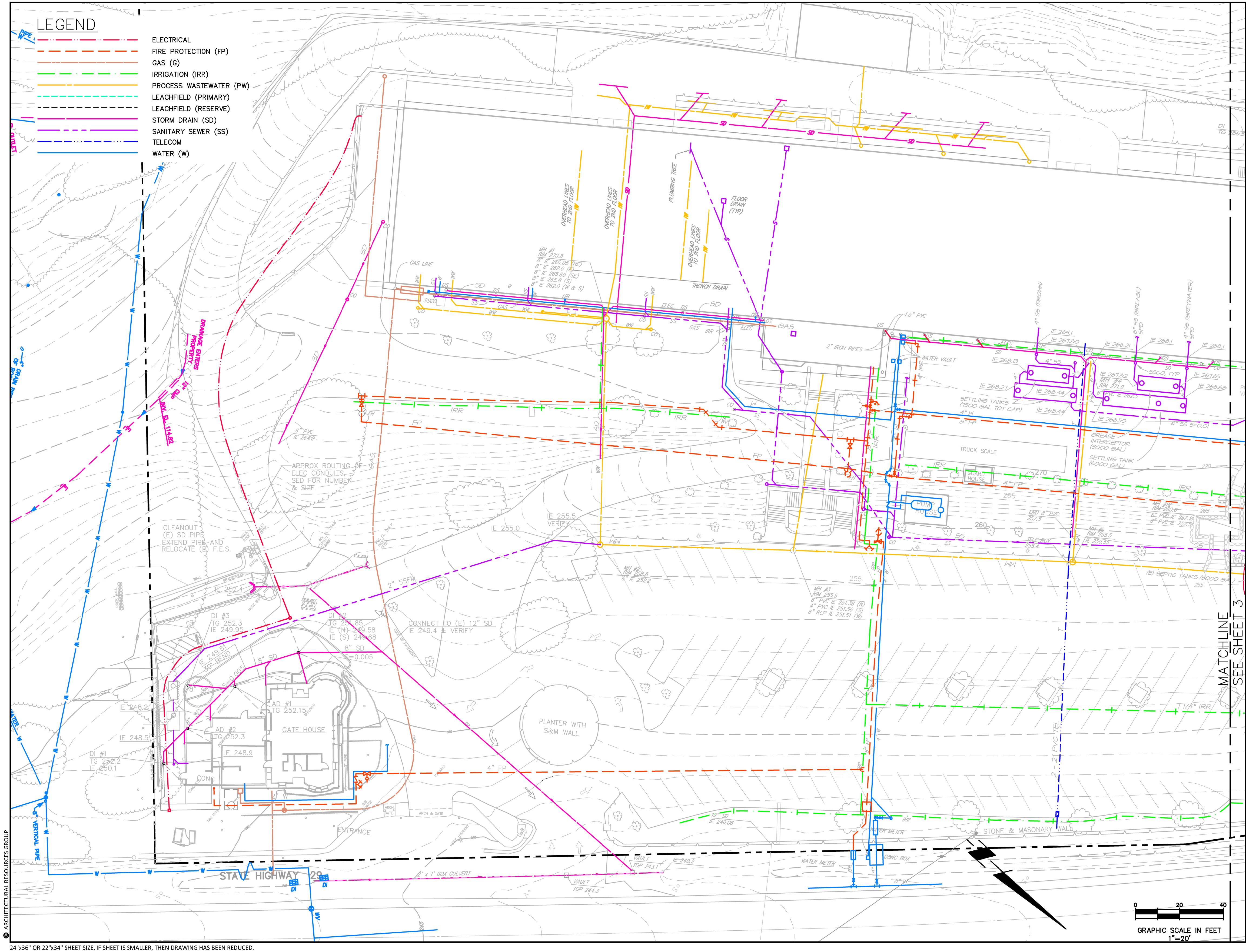
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**C-1**  
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SHEET TITLE

**UTILITY PLAN  
ENLARGED SOUTH**

USE PERMIT AND DESIGN REVIEW  
SUBMITTAL

06/21/2016

PROJ NO.  
11208.01

DRAWN  
TF

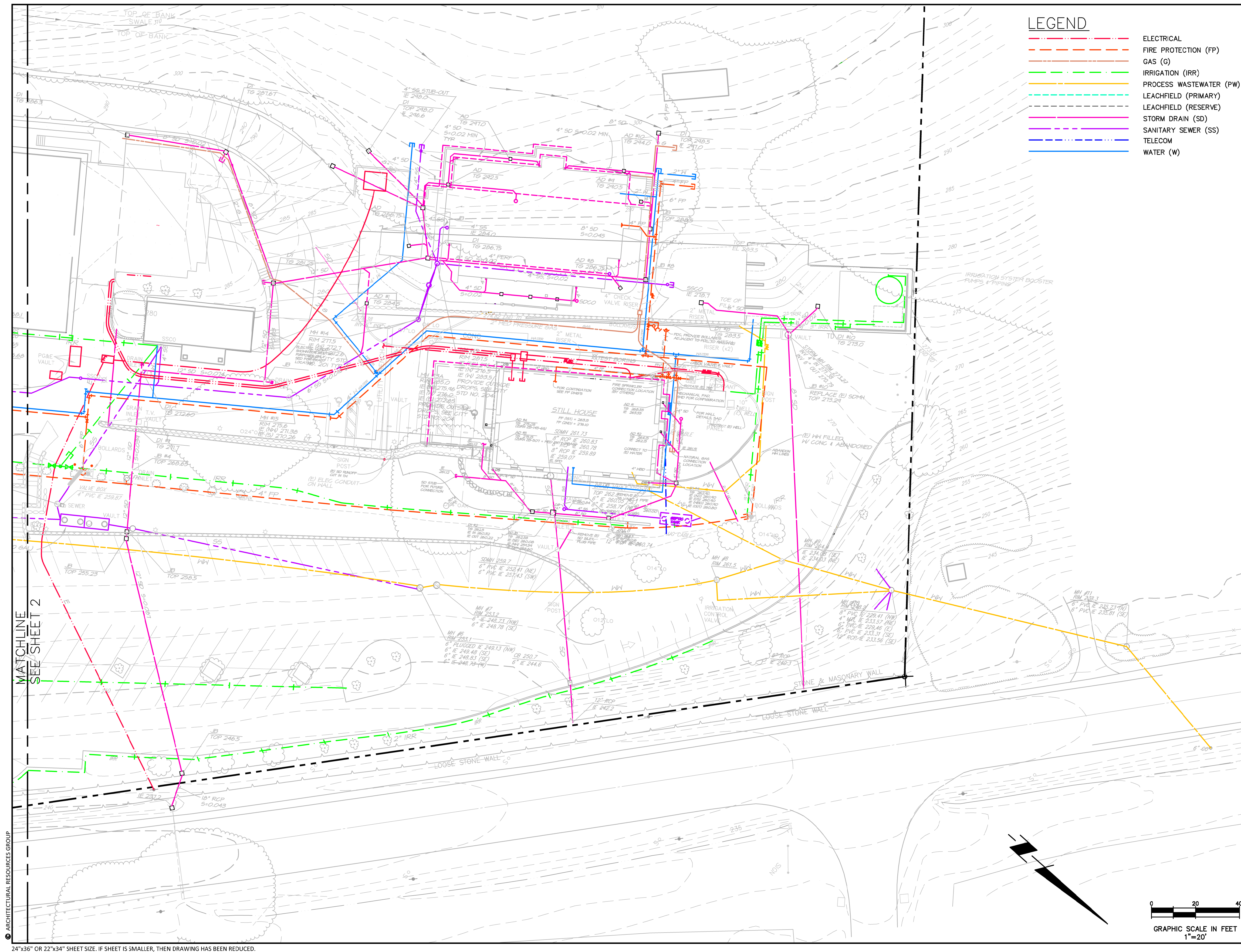
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DRAWING NO.

**C-2**

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AT GREYSTONE

---

2555 MAIN STREET  
ST. HELENA, CALIFORNIA

SHEET TITLE

UTILITY PLAN  
ENLARGED NORTH

USE PERMIT AND DESIGN REVIEW  
SUBMITTAL

---

06/21/2016

PROJ NO.  
11208.01

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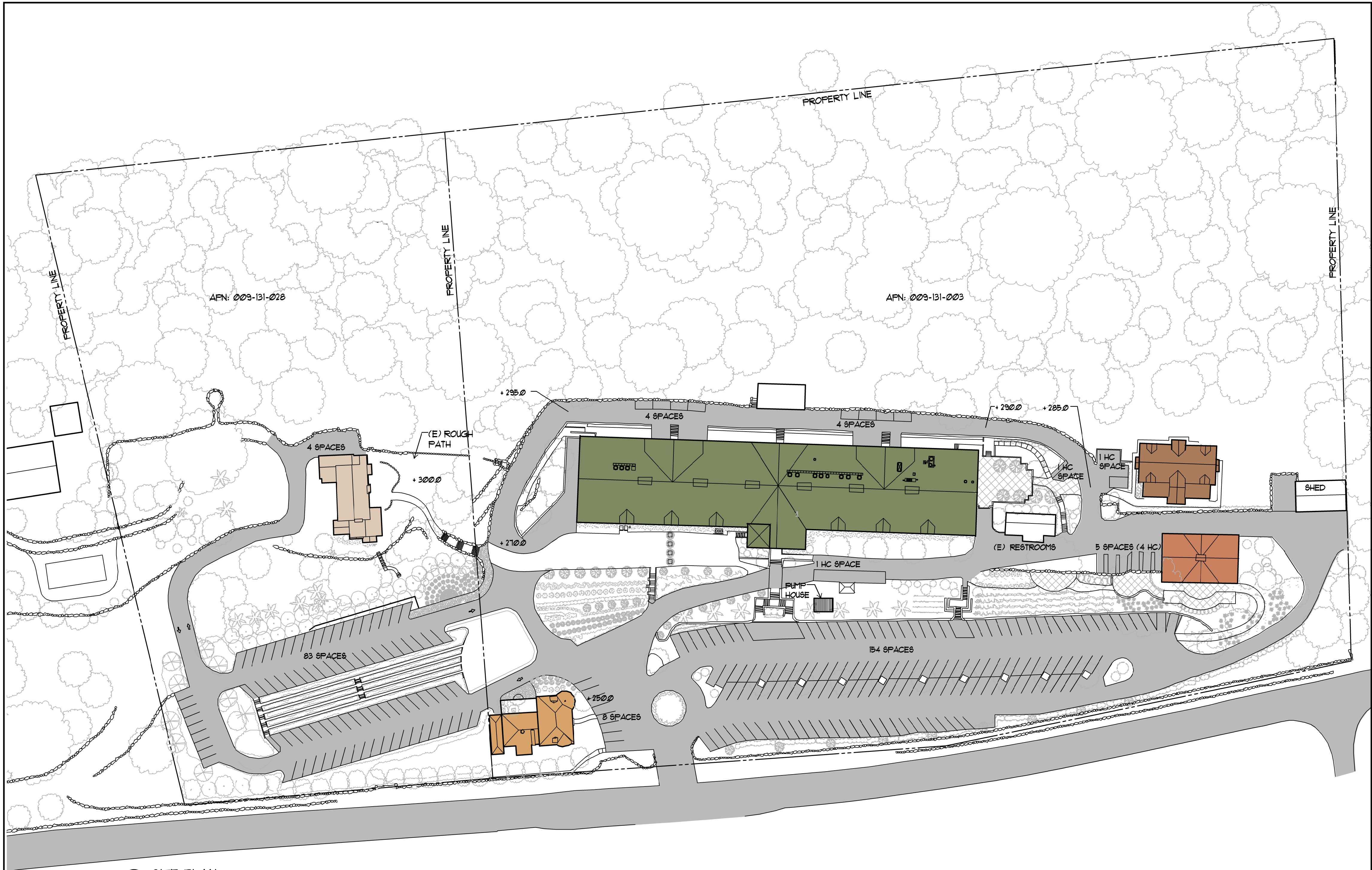
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SW

DRAWING NO. C-3  
SHEET OF 1





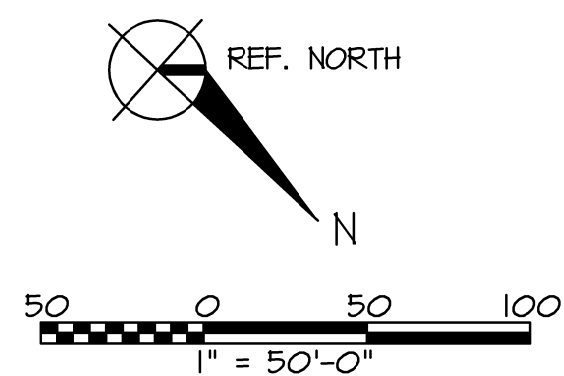
 SITE PLAN  
SCALE: 1" = 50'-0"  
X SITE PLAN NEW

PARKING - EXISTING TO REMAIN

|                |            |
|----------------|------------|
| GREYSTONE SITE | 178 SPACES |
| CARPY SITE     | 87 SPACES  |
| TOTAL          | 265 SPACES |

KEY

|                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  RUDD CENTER EDU. PROGRAM & "SEMESTER AWAY" WINE PROGRAM (TO REMAIN UNCHANGED)                                             |  GREYSTONE - INTERIOR REMODEL FOR EDUCATIONAL FACILITIES; SMALL STORAGE ADDITION AT REAR DRIVE. NEW CAVE CONSTRUCTION AT NORTH END OF BUILDING. (SEE DRAWING A2.1 AND A2.1a) |
|  FLAVOR DISCOVERY CENTER - PROPOSED STUDENT RUN RESTAURANT - 58 SEATS (SUBMITTED UNDER SEPARATE DESIGN REVIEW APPLICATION) |  CARPY HOUSE (TO REMAIN UNCHANGED)                                                                                                                                           |
|  GUEST HOUSE - 47 BEDS (TO REMAIN UNCHANGED)                                                                               |                                                                                                                                                                                                                                                                   |



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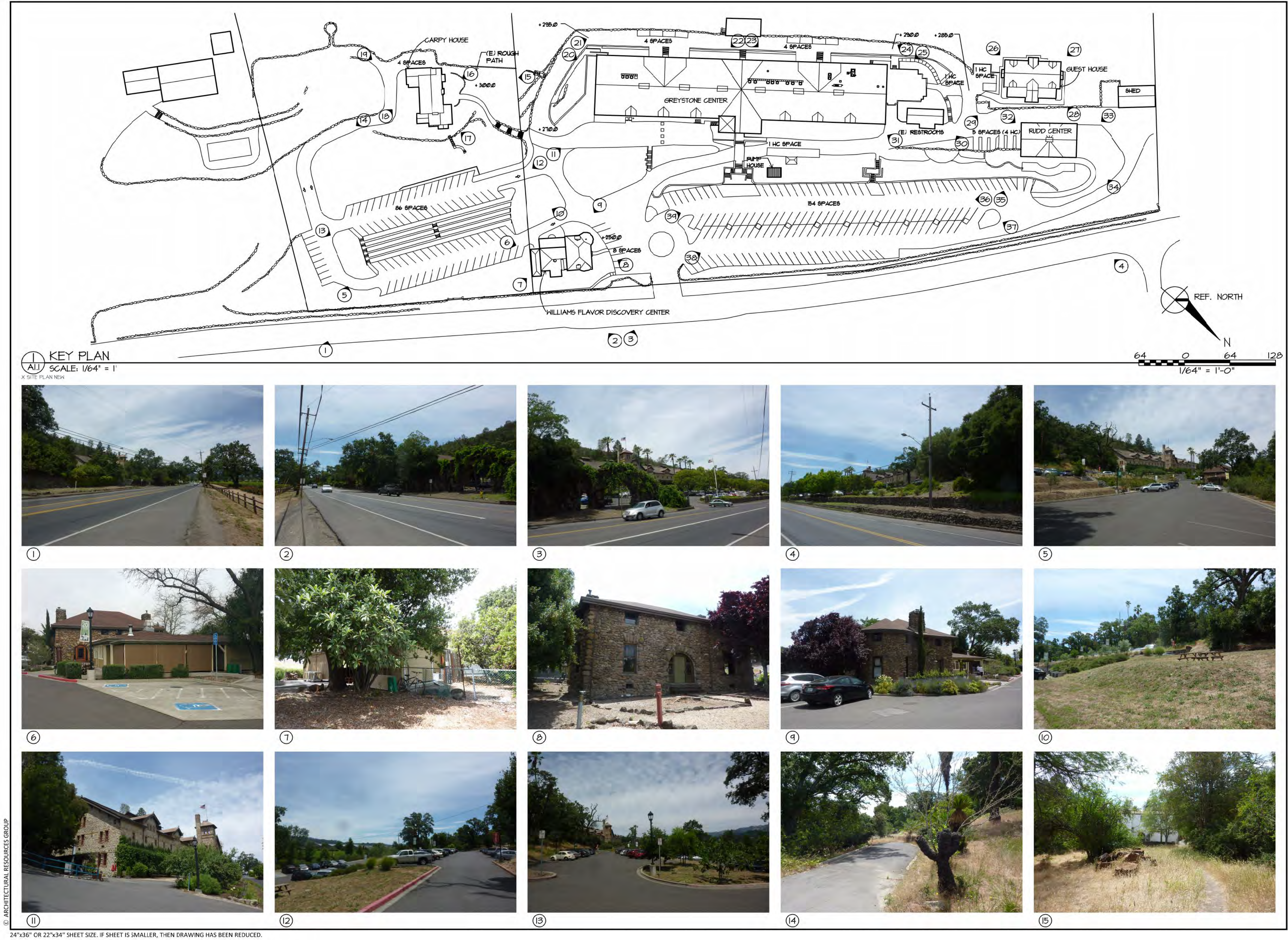
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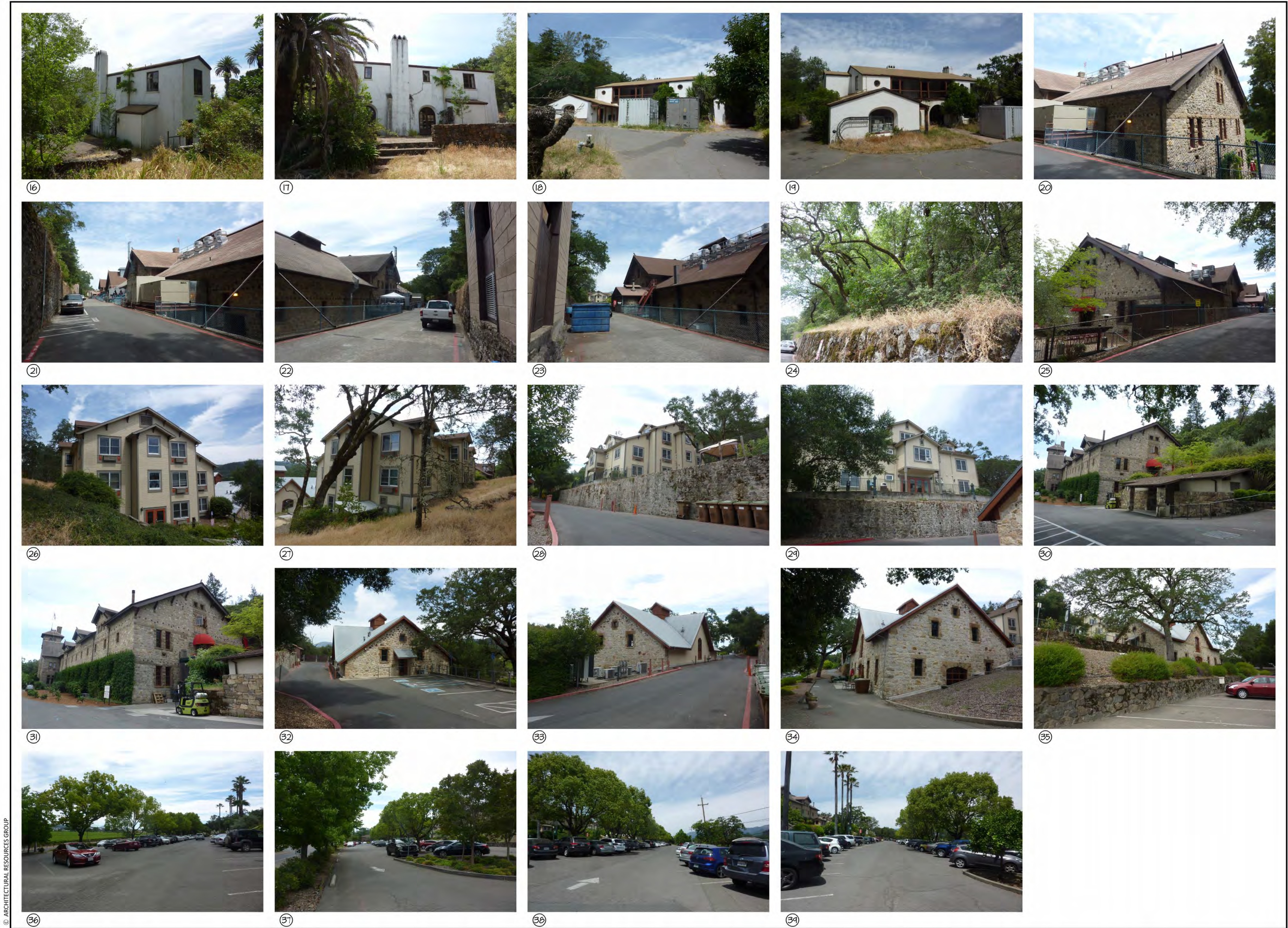
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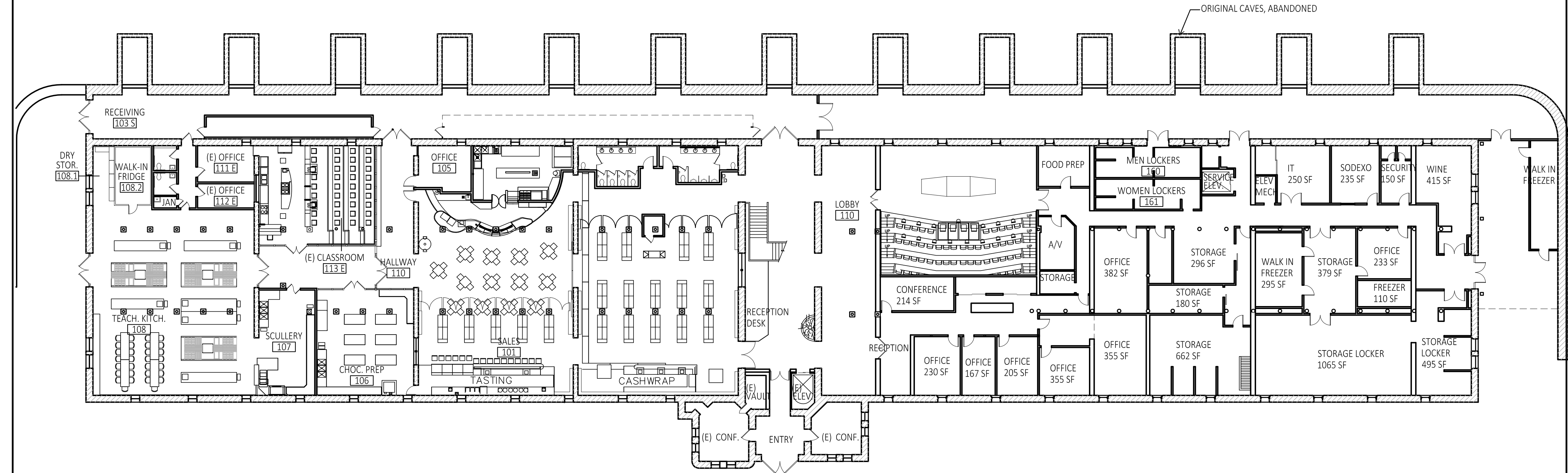
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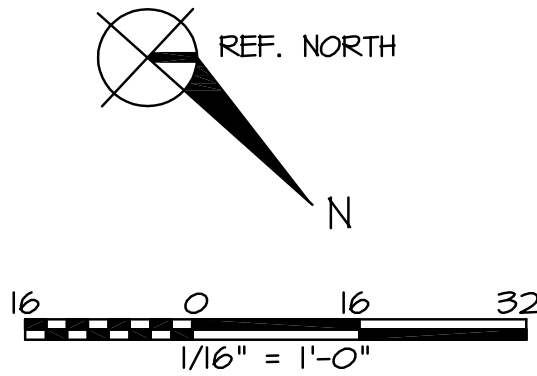
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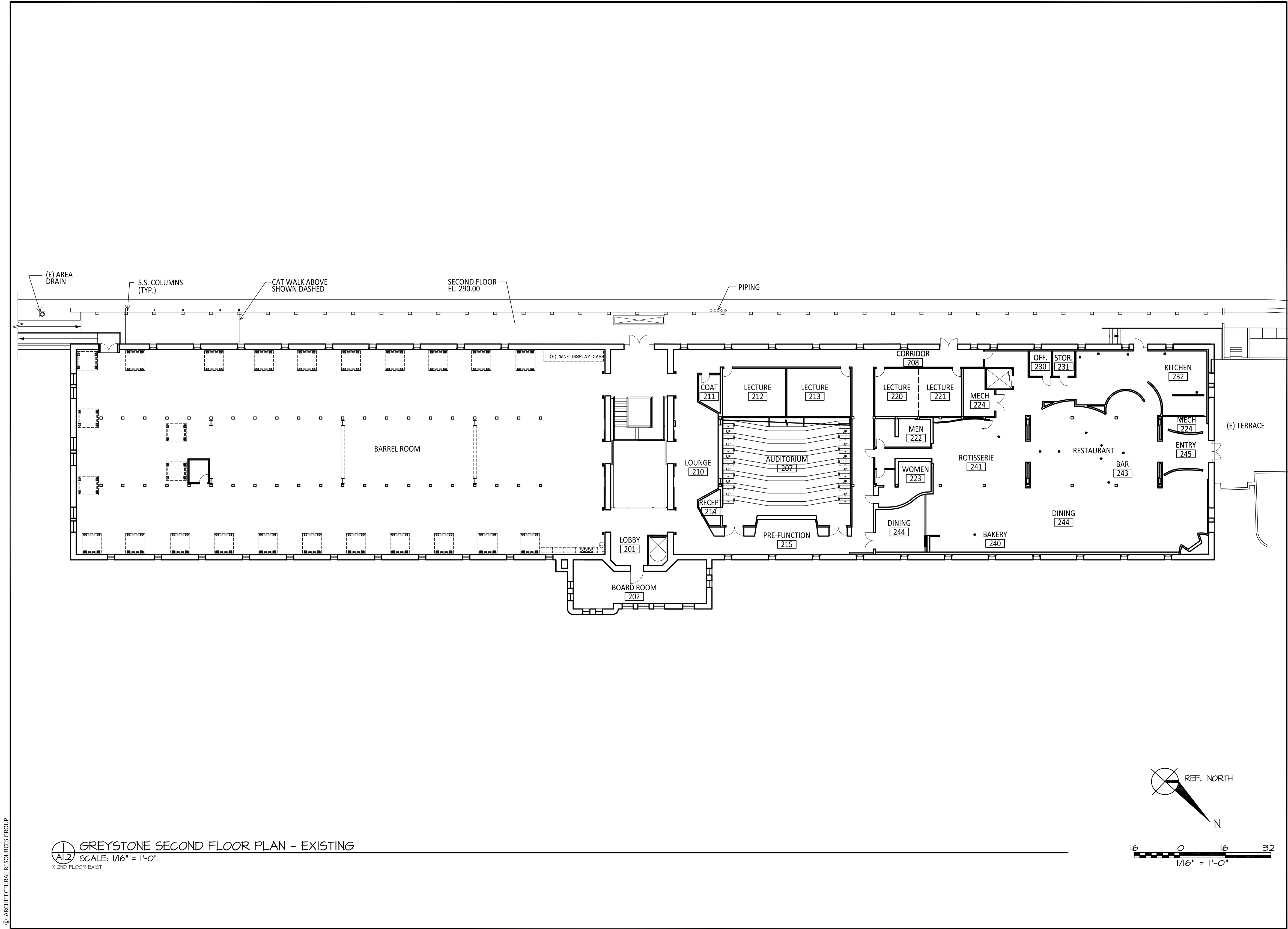
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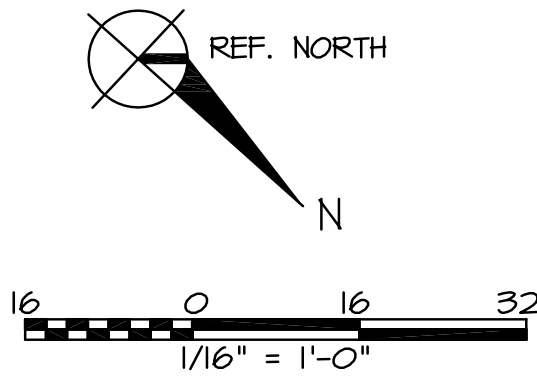
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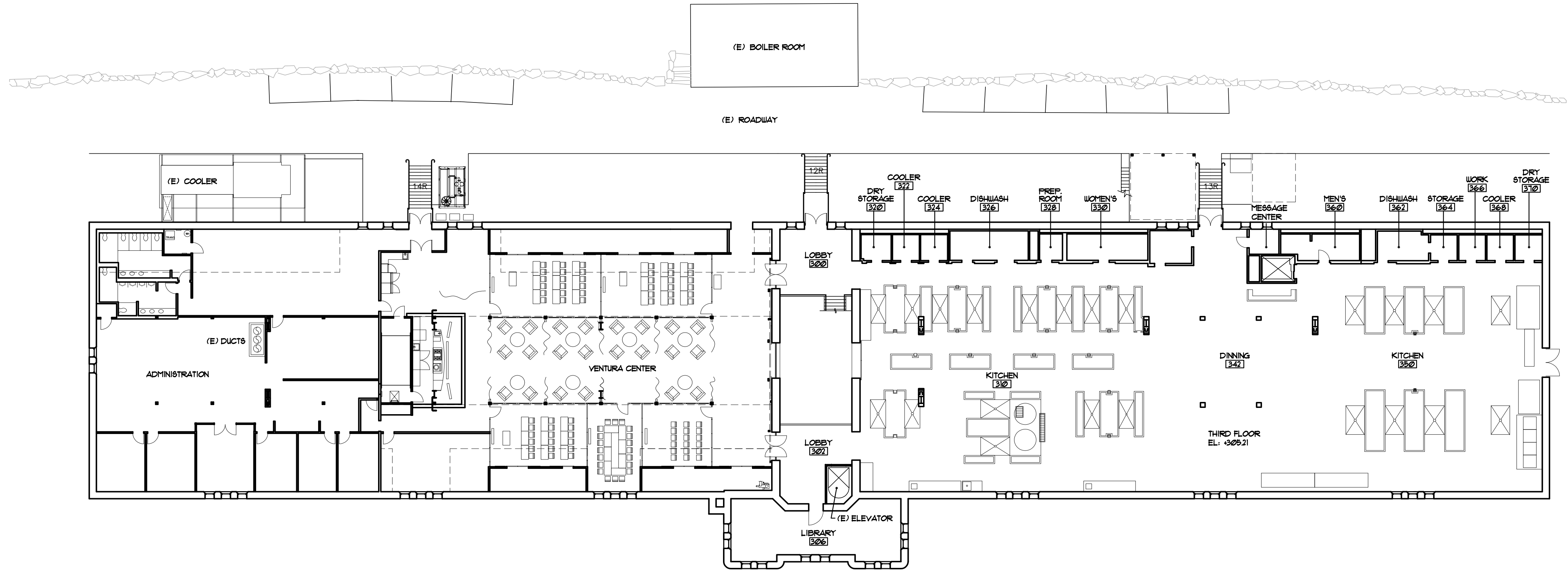
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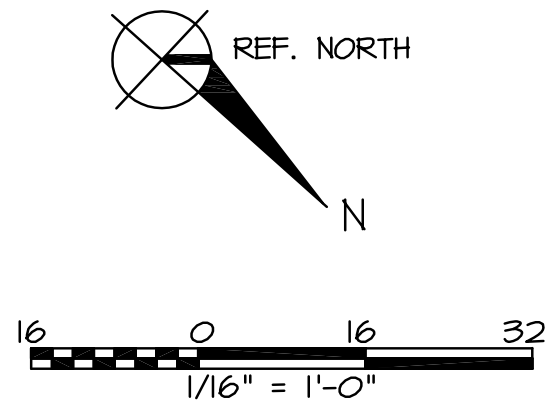




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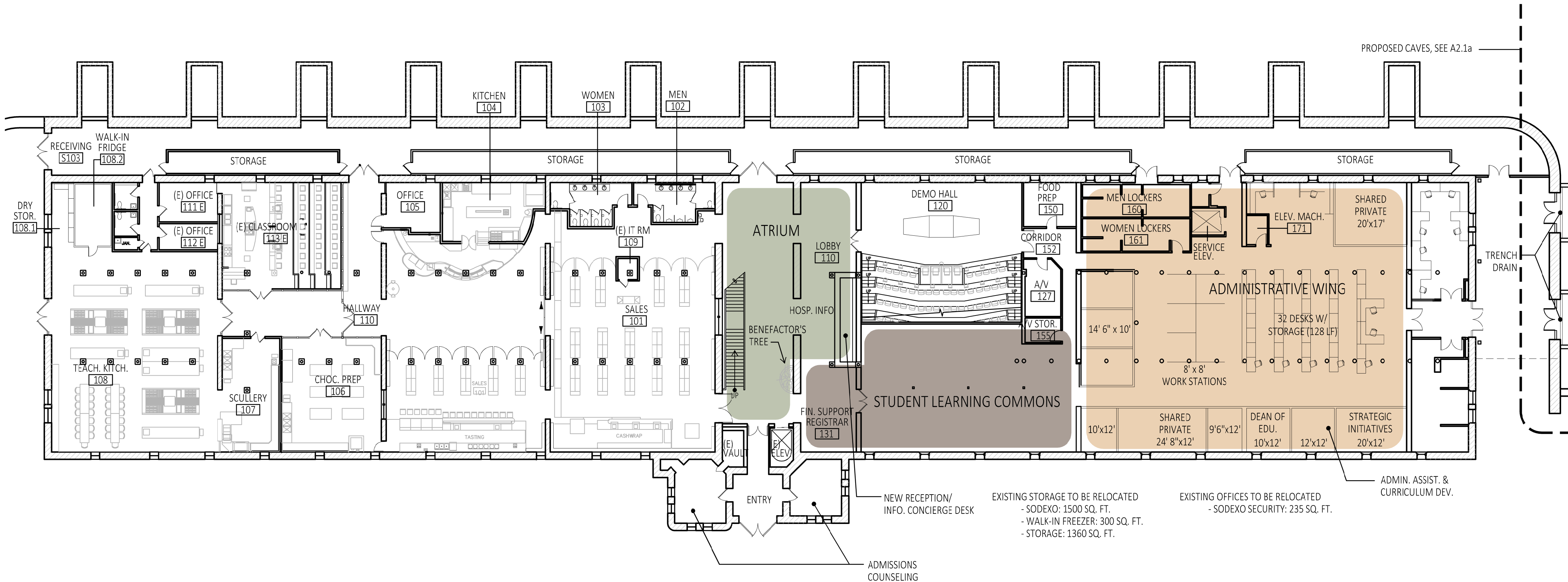
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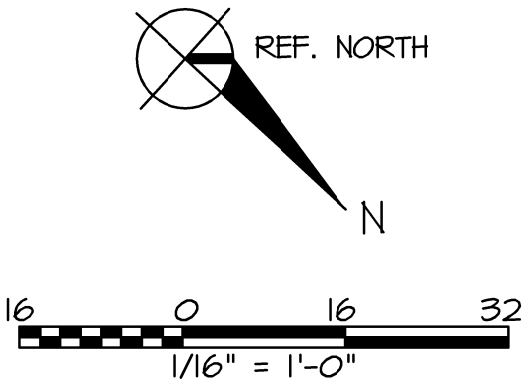
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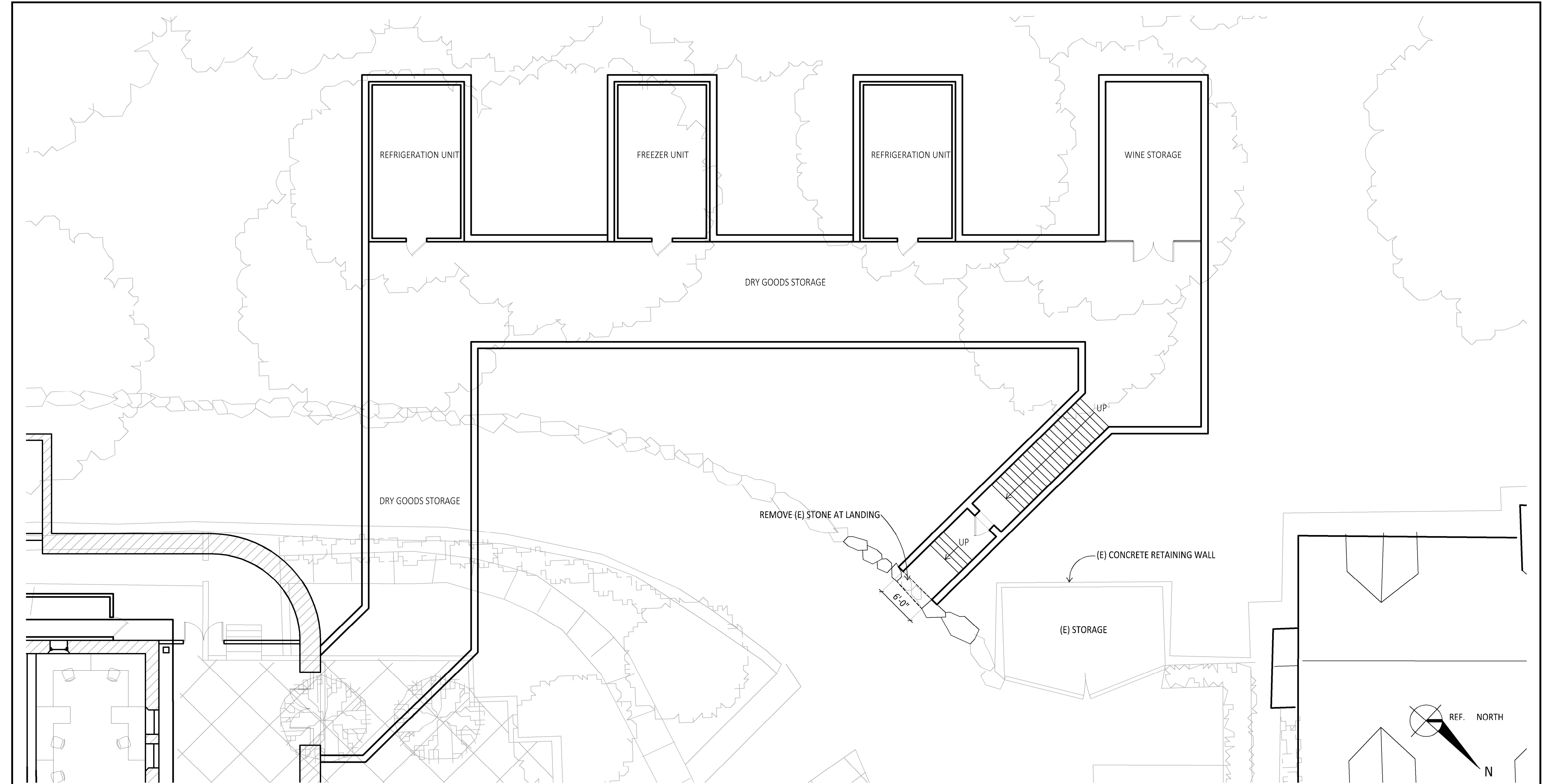
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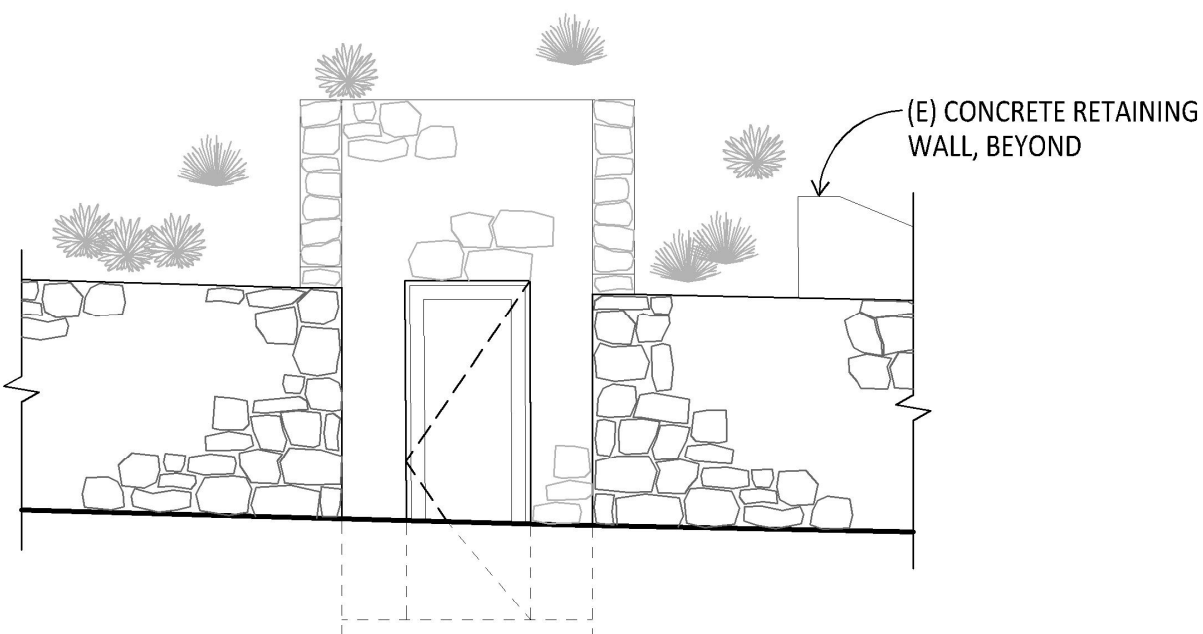




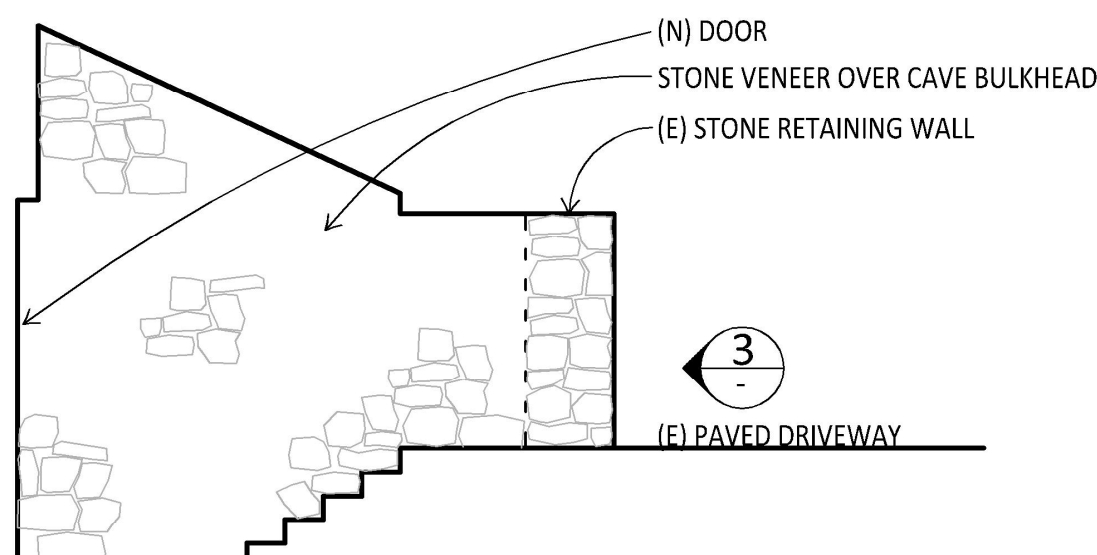
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2 CAVE PORTAL EXISTING CONDITIONS



3 CAVE PORTAL EXTERIOR ELEVATION  
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4 CAVE PORTAL EXTERIOR SECTION  
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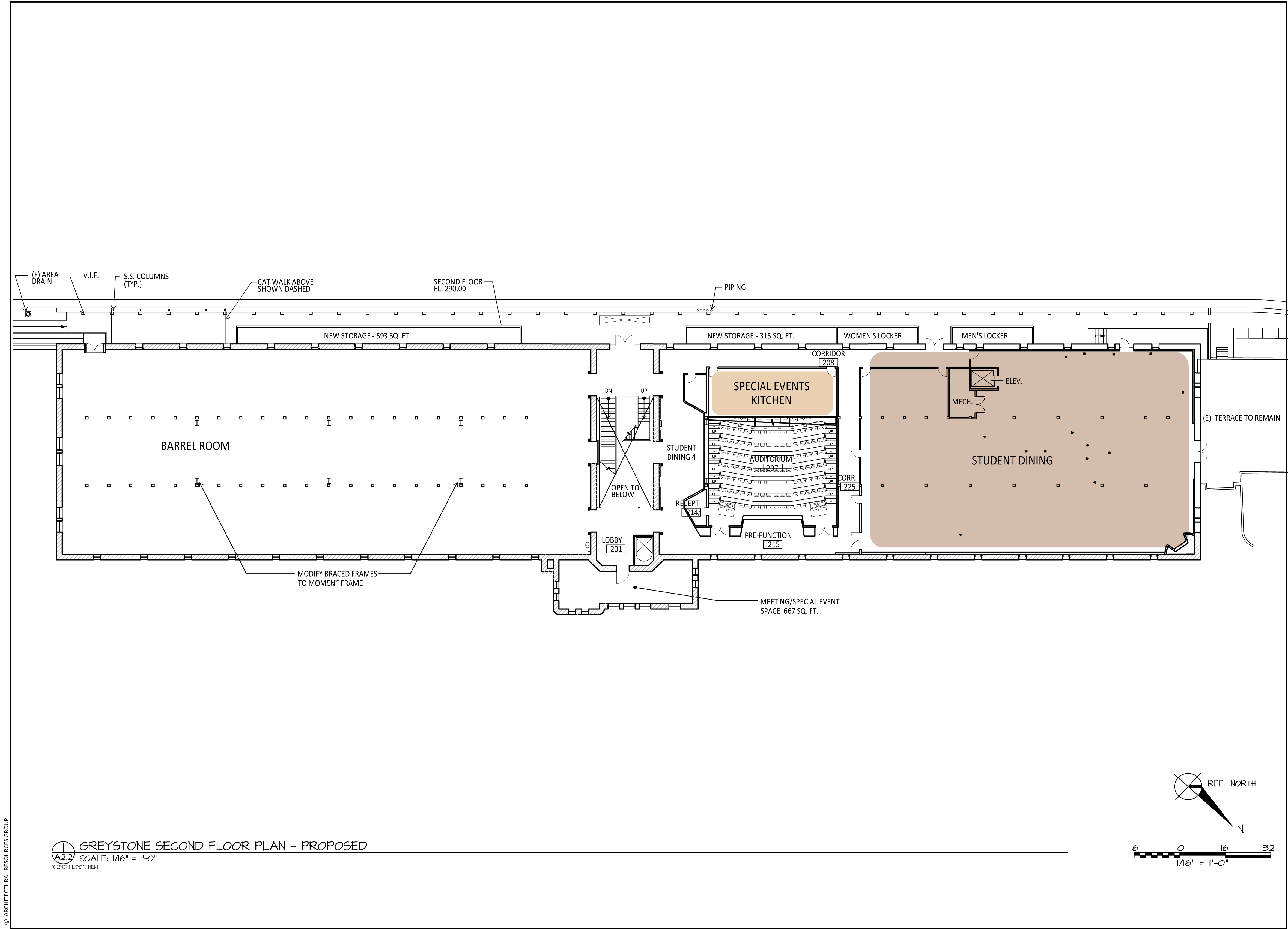
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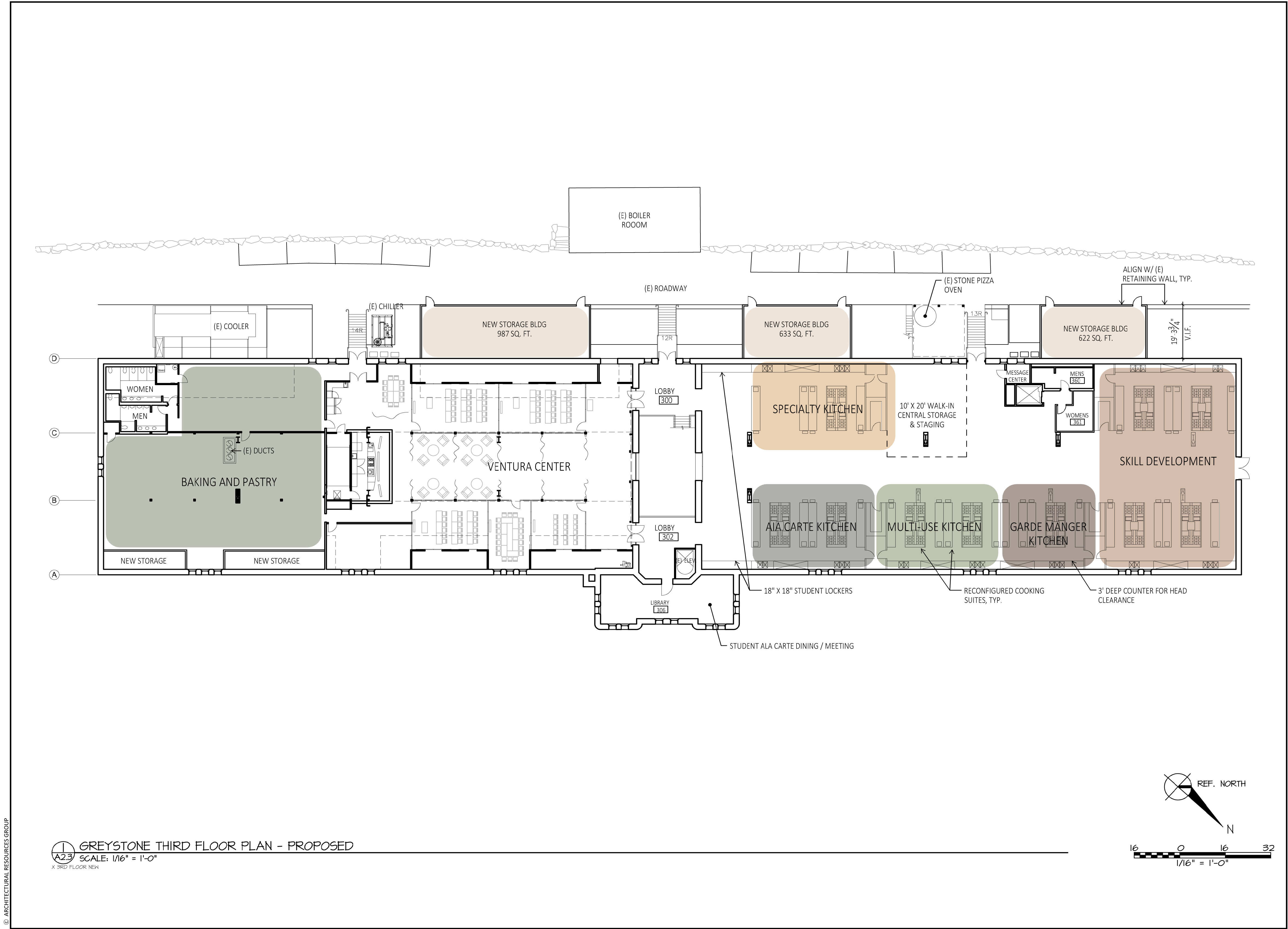
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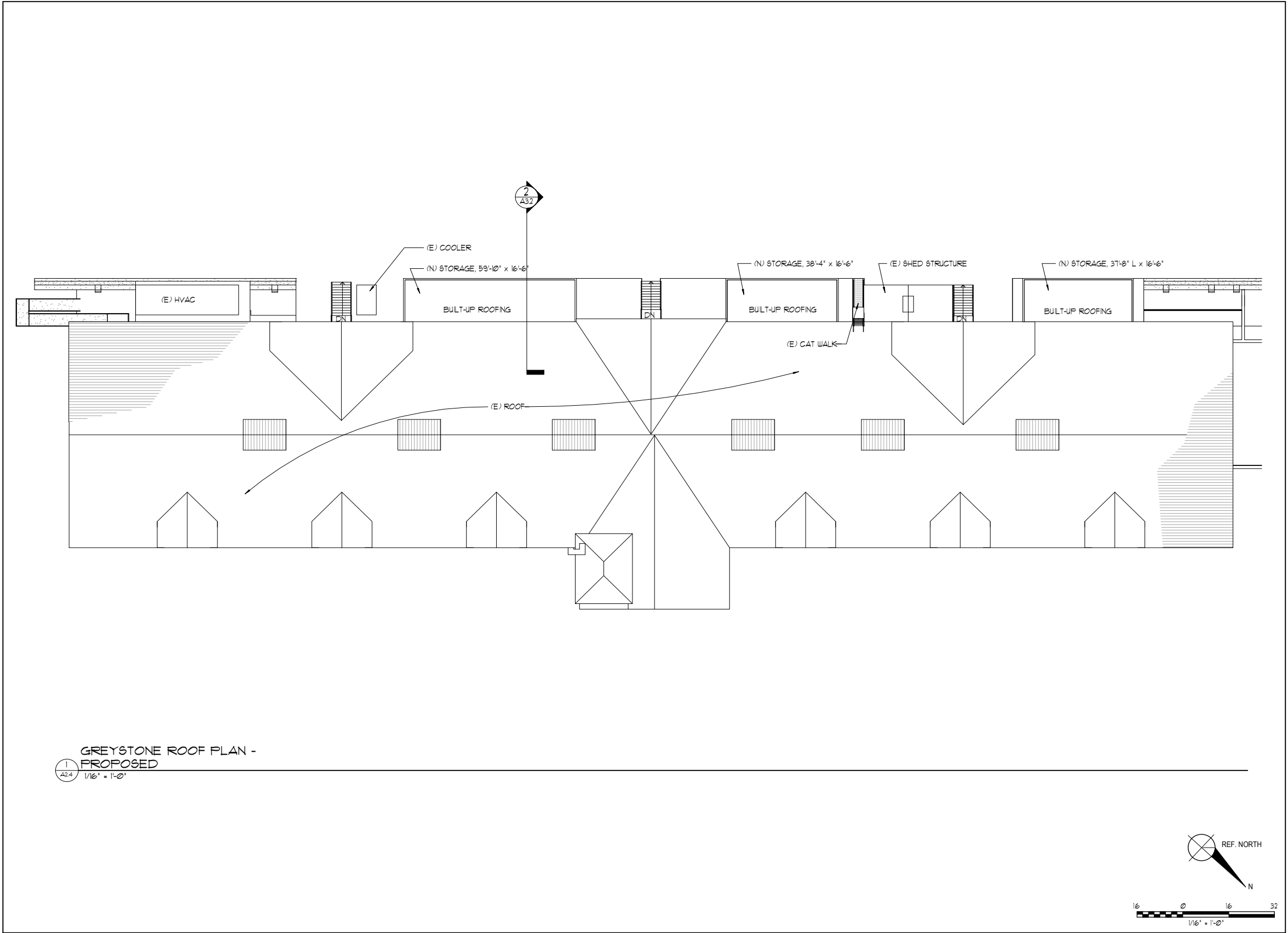
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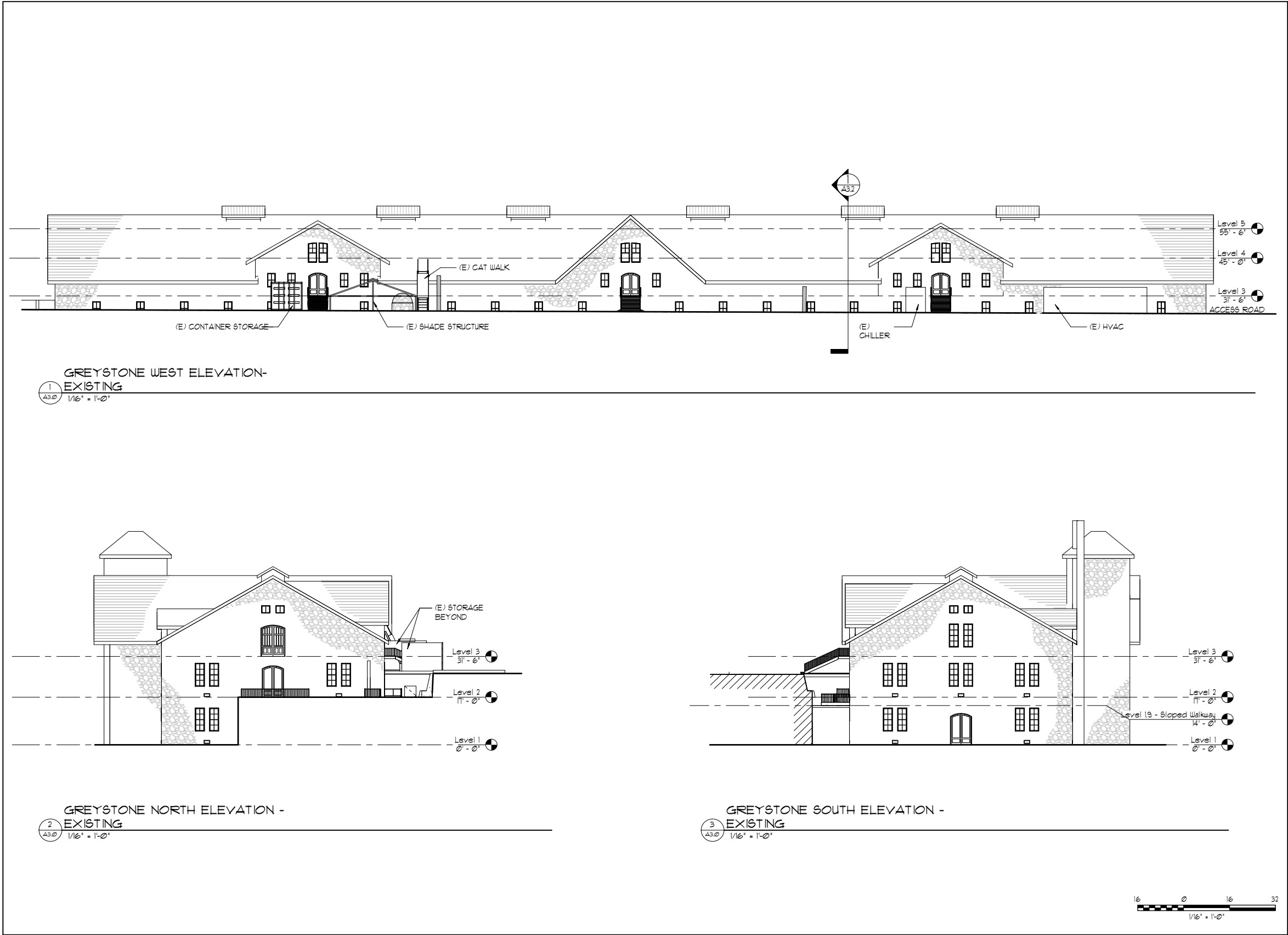
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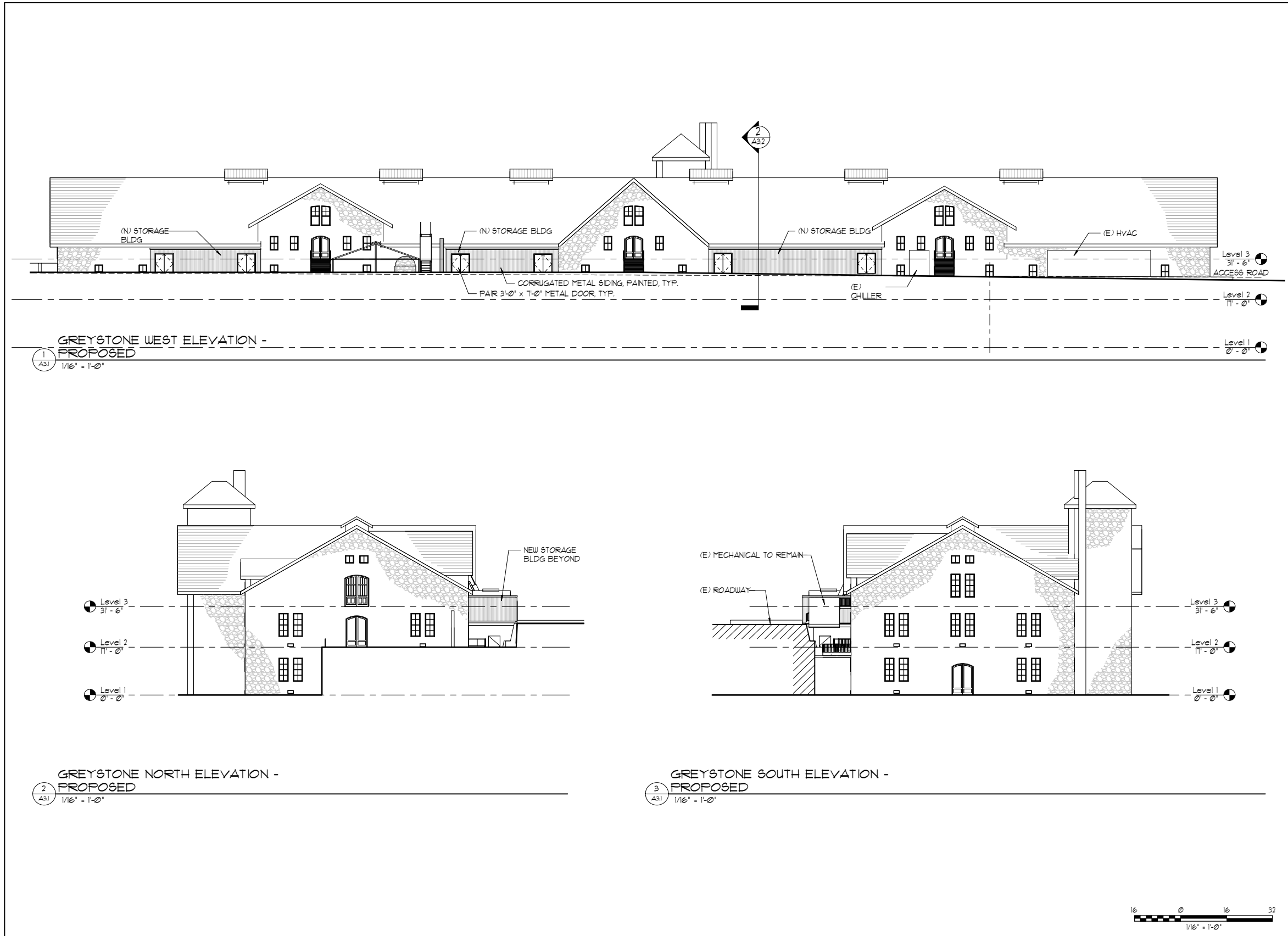
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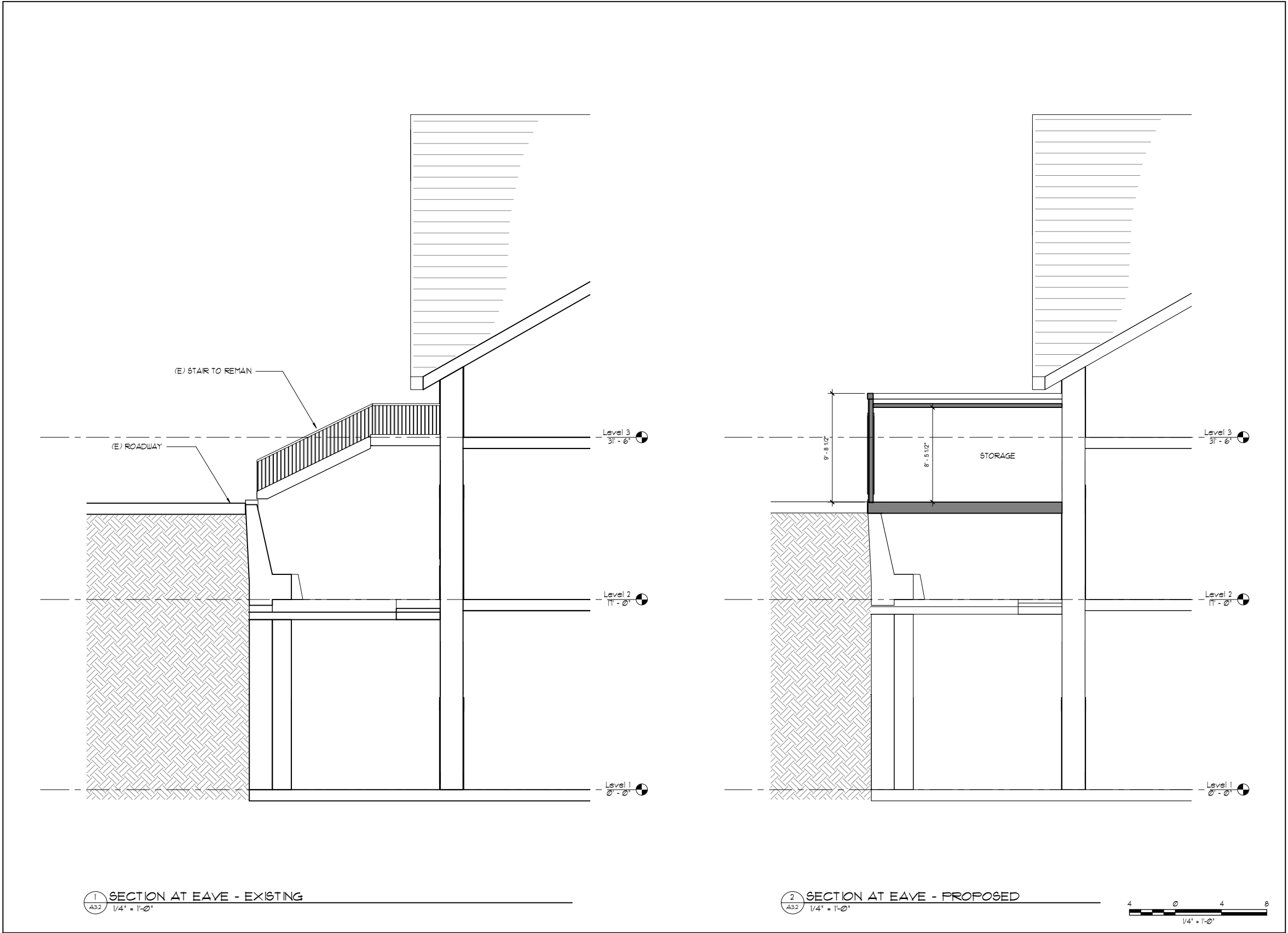
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WASTEWATER FEASIBILITY  
STUDY

Culinary Institute of America -  
Greystone

2555 Main Street, St. Helena, California

APN 009-131-003



Project No. 2016039  
June 15, 2016

CIA – Greystone  
Wastewater Feasibility Study  
June 15, 2016

SUMMIT ENGINEERING, INC.  
Project No. 2016039

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**LIST OF ENCLOSURES**

Enclosure A:      Wastewater System Schematic

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Wastewater Feasibility Study  
June 15, 2016

SUMMIT ENGINEERING, INC.  
Project No. 2016039

## PROJECT OVERVIEW

The Culinary Institute of America (CIA) at Greystone is applying for a Use Permit modification for improvements to an existing educational facility located at 2555 Main St, in St. Helena (APN 009-131-003). The project site is located on the western side of Main St (also Highway 29) north of downtown St. Helena. The project site is situated near the toe of the valley floor, sloping up to the southwest away from Highway 29.

Greystone is made up of a 13.47 acre parcel, with five (5) buildings serving an enrollment of 200 students, and an adjacent 5 acre parcel which provides additional parking. The Use Permit Application includes the elimination of the existing 190-seat Wine Spectator Greystone Restaurant, and a decrease from 68 to 58 seats in the Williams Flavor Discovery Center (FDC). Operation of the FDC will also decrease from the current 362 days per year to 180 days per year (5 days per week for 36 weeks). Some proposed changes to the expected student, staffing and guest counts are included as well. Additional interior site improvements are shown on the Architectural Site Plans (no exterior site work is proposed). The new educational facilities will have the capacity for 300 students per year, compared to the existing 200. Improvements to the existing dishwashing and other kitchen facilities, including replacement with more water and energy efficient equipment, in addition to the change in intensity of the new restaurant, is anticipated to reduce the overall water and wastewater demand for the site, as outlined in the sanitary sewage (SS) management system section.

The Greystone campus currently disposes of all effluent from the SS collection system in the Markham Combined Wastewater System (MCWS) and will continue to utilize this treatment system after the site improvements discussed in this application. Overall, the proposed improvements will lead to a net decrease in flows conveyed and treated at the MCWS, which will not adversely impact the disposal capacity of the MCWS treatment system. Summit Engineering has prepared the following Wastewater Feasibility Study outlining the proposed SS flows and associated treatment and disposal systems.

## SANITARY SEWAGE MANAGEMENT SYSTEM

Greystone intends to utilize the existing, permitted MCWS located at Markham Winery on Highway 29 north of St. Helena for all SS treatment and disposal. The MCWS consists of two aerated ponds, settling, filtration, hypochlorite disinfection and either evaporation or irrigation disposal. Greystone will continue to utilize the onsite primary treatment, including one 3,000 gallon grease interceptor, two 7,500 gallon settling tanks and one 6,000 gallon settling tank, and a pump sump and pump to convey the SS flows to the MCWS. The MCWS has 4 users: CIA, Markham Winery, Freemark Abbey, and the Wine Country Inn. The facility was sized to handle effluent from all 4 properties. The system has adequate capacity to accommodate approximately 15,000 gallons per day (gpd) based on the original water allotment agreement with the City of St. Helena. Waste Discharge Requirements for the MCWS permit Greystone to contribute an annual total of 5.42 million gallons, which is approximately equal to 14,850 gpd. The existing primary treatment system will have excess capacity to accommodate the proposed SS peak flows, as the proposed flow will decrease. More details on the projected peak SS flows are provided below.

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### **SANITARY SEWAGE CHARACTERISTICS**

SS will consist primarily of wastewater generated from restrooms, kitchen and dishwashing facilities. Typical SS characteristics are summarized below:

**TABLE 1. TYPICAL SANITARY SEWER CHARACTERISTICS**

| <b><u>Characteristic</u></b>    | <b><u>Units</u></b> | <b><u>Raw Wastewater Range<sup>1</sup></u></b> |
|---------------------------------|---------------------|------------------------------------------------|
| BOD <sub>5</sub>                | mg/L                | 110 - 220                                      |
| Grease                          | mg/L                | 50-100                                         |
| Total Suspended Solids (TSS)    | mg/L                | 100 - 220                                      |
| Volatile Suspended Solids       | mg/L                | 80 - 165                                       |
| Total Dissolved Solids (TDS)    | mg/L                | 250 - 500                                      |
| Nitrogen                        | mg/L                | 20 - 40                                        |
| Nitrate                         | mg/L                | 0                                              |
| Phosphorous                     | mg/L                | 4 - 8                                          |
| Alkalinity (CaCO <sub>3</sub> ) | mg/L                | 50 - 100                                       |
| Chloride                        | mg/L                | 30 - 50                                        |
| Sulfate                         | mg/L                | 20 - 30                                        |

<sup>1</sup>Typical composition of untreated domestic wastewater, Metcalf & Eddy, "Wastewater Engineering, Third Edition", 1991

### **SANITARY SEWAGE DESIGN FLOWS**

The SS management system at Greystone will convey primary treated wastewater generated from the restrooms, kitchen and dishwashing facilities. Flows are estimated based on the gallons per capita per day (gpcd) for each user of the facility. In addition to students, Greystone will have instructors, staff, restaurant guests and visitors as follows:

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**GREYSTONE SANITARY SEWAGE**

|                                                    |     |   | Water<br>Use<br>(gpcd) |   | Daily<br>Flow<br>(gal/day) | Days Used<br>Per Year: | Annual<br>Flow<br>(ac-ft/yr) |
|----------------------------------------------------|-----|---|------------------------|---|----------------------------|------------------------|------------------------------|
| <u>Administration</u>                              |     |   |                        |   |                            |                        |                              |
| Administration                                     | 6   | x | 15                     | = | 90                         | 355                    | 0.10                         |
| F&B Operations (including<br>Special Events Staff) | 22  | x | 15                     | = | 330                        | 355                    | 0.36                         |
| <u>Restaurant</u>                                  |     |   |                        |   |                            |                        |                              |
| Restaurant Staff and F&B<br>Management             | 3   | x | 15                     | = | 45                         | 355                    | 0.05                         |
| <u>Flavor Discovery Center</u>                     |     |   |                        |   |                            |                        |                              |
| Restaurant Guests                                  | 58  | x | 15                     | = | 1,020                      | 180                    | 0.48                         |
| <u>Café</u>                                        |     |   |                        |   |                            |                        |                              |
| Café Staff                                         | 7   | x | 15                     | = | 105                        | 355                    | 0.11                         |
| Café Guests                                        | 42  | x | 6                      | = | 252                        | 355                    | 0.27                         |
| <u>Campus Store</u>                                |     |   |                        |   |                            |                        |                              |
| Store Staff                                        | 6   | x | 20                     | = | 120                        | 355                    | 0.13                         |
| Store Guests                                       | 20  | x | 3                      | = | 60                         | 355                    | 0.07                         |
| <u>Education</u>                                   |     |   |                        |   |                            |                        |                              |
| Students                                           | 300 | x | 23                     | = | 6,900                      | 308                    | 6.52                         |
| Instructors                                        | 25  | x | 15                     | = | 375                        | 326                    | 0.38                         |
| Education Staff                                    | 18  | x | 15                     | = | 270                        | 326                    | 0.27                         |
| <u>Guests/Hospitality</u>                          |     |   |                        |   |                            |                        |                              |
| Visitors and Hospitality Staff                     | 2   | x | 15                     | = | 30                         | 355                    | 0.03                         |
| Visitors and Hospitality<br>Guests                 | 25  | x | 3                      | = | 75                         | 355                    | 0.08                         |
| <u>Food Enthusiast</u>                             |     |   |                        |   |                            |                        |                              |
| Food Enthusiast Education<br>Staff                 | 3   | x | 15                     | = | 45                         | 355                    | 0.05                         |
| Food Enthusiast Education<br>Guests                | 20  | x | 15                     | = | 300                        | 355                    | 0.33                         |
| <b>TOTAL SANITARY SEWAGE DESIGN<br/>FLOW</b>       |     |   |                        |   | <b>=</b>                   | <b>9,867 gpd</b>       | <b>9.23 ac-ft/yr</b>         |

The SS management system is designed to handle wastewater generated from all campus activities at the peak daily demand. Peak SS generation is estimated using the detailed flow distribution above, which distinguishes between the various users and per capita usage estimates per Napa County guidelines. For instructors, administration staff, restaurant staff, and restaurant guests, the peak flow is estimated using 15 gpcd. For the campus store staff, peak flow is estimated at 20 gpcd. For store visitors and hospitality guests, the peak flow is

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estimated using 3 gpcd, and the peak flow is estimated using 6 gpcd for café guests. For the students at the facility, peak flow is estimated at 23 gpcd.

The counts and distributions of students, staff and guests are based on the site development plans provided by the project architect. The proposed peak daily SS generation is estimated to be only 9,867 gpd after facility improvements. Additionally, Greystone is proposing to upgrade existing dishwashing and kitchen facilities to highly water and energy efficient equipment, which should result in additional water savings, and as a result, a reduction in wastewater production.

The SS management system was designed to handle the total peak daily SS flow of approximately 15,000 gpd corresponding to the original SS design flow from all operations. The current proposed daily flow of 9,867 gpd is significantly less than the estimated existing SS generation of 12,000 gpd and less than the original design flow of 15,000 gpd. The proposed annual flow was determined based on the proposed operating schedule for the various uses, with the restaurant only operating 180 days per year and the remaining flows conservatively estimated based on feedback from CIA staff. The total estimated annual flow is 3.01 million gallons per year (9.23 ac-ft/year), which is well below the total permitted discharge capacity of 5.42 million gallons per year (16.63 ac-ft/year).

#### **SANITARY SEWAGE CONVEYANCE, TREATMENT AND DISPOSAL**

The SS treatment and disposal system will have the components described below. Refer to Enclosure A for the SS management system schematic.

##### **Gravity Collection**

The gravity collection system is assumed to be designed to provide low maintenance and no infiltration or exfiltration. Piping is likewise assumed to be compatible with sanitary sewer and satisfy Uniform Plumbing Code and local requirements.

##### **Septic Tanks with Effluent Filter**

Solids settling and digestion in the septic tanks helps to reduce BOD and TSS concentrations entering the treatment and disposal system, increasing treatment system efficiency. SS leaving the Greystone building is collected in either a 3,000 gallon grease interceptor and 6,000 gallon settling tank, or two series settling tanks with a total volume of 7,500 gallons. SS flows into a pump tank, where it is pumped into a 3" force main and ultimately to the MCWS for treatment and disposal.

The septic tank size for the SS flows was evaluated based on the Uniform Plumbing Code, as follows:

##### **Uniform Plumbing Code Method:**

$$Volume = 1,125 + 0.75 \times Flow\ Rate$$

$$Volume = 1,125 + 0.75 \times 10,500\ gpd$$

$$Volume = 9,000\ gallons$$

CIA – Greystone  
Wastewater Feasibility Study  
June 15, 2016

SUMMIT ENGINEERING, INC.  
Project No. 2016039

The minimum 9,000 gallon septic tank volume is achieved by the use of the total 13,500 gallons of existing settling tank volume prior to treatment of SS flows at the MCWS. The excess volume increases retention time and should provide greater solids removal compared to the existing flow rate.

#### **Pump Tank**

The pump tank receives combined flow from the parallel (7,500 gal & 6,000 gal) settling tanks and grease interceptor (3,000 gal)/ settling tank trains, and conveys the flow to the MCWS aerated treatment pond. The pump station was sized to accommodate the higher design flows previously planned for the facility; therefore no changes are proposed to the existing pumps at this time.

#### **Flow Measurement**

Flow meters are currently installed in order to determine the CIA facility's total contribution to the MCWS. If necessary, the flowmeters will be calibrated, but no other changes to the flow measuring system are proposed at this time.

### **OTHER CONSIDERATIONS**

#### **ODOR CONTROL**

There should be no noxious odors from a properly designed and operated treatment system. See Alternative Courses of Action for operation alternatives.

#### **GROUNDWATER CONTAMINATION**

The nearest water well to the SS treatment system will be a minimum of 100 feet. No disposal of wastewater effluent will occur within 100 feet of any existing wells.

#### **PROTECTION**

The grease interceptor and settling tanks will be protected to restrict access and potential damage to the system, including the use of locking covers for the settling tanks and bollards to prevent vehicle traffic above the underground tanks.

#### **ALTERNATIVE COURSES OF ACTION**

Should there be any unforeseen operational difficulties for the SS management system, the following additional courses of action would be available if necessary:

- ◆ Temporary pumping and truck transfer of wastewater to an approved treatment plant would be used as additional courses of action
- ◆ Additional stages of treatment to increase effluent quality.



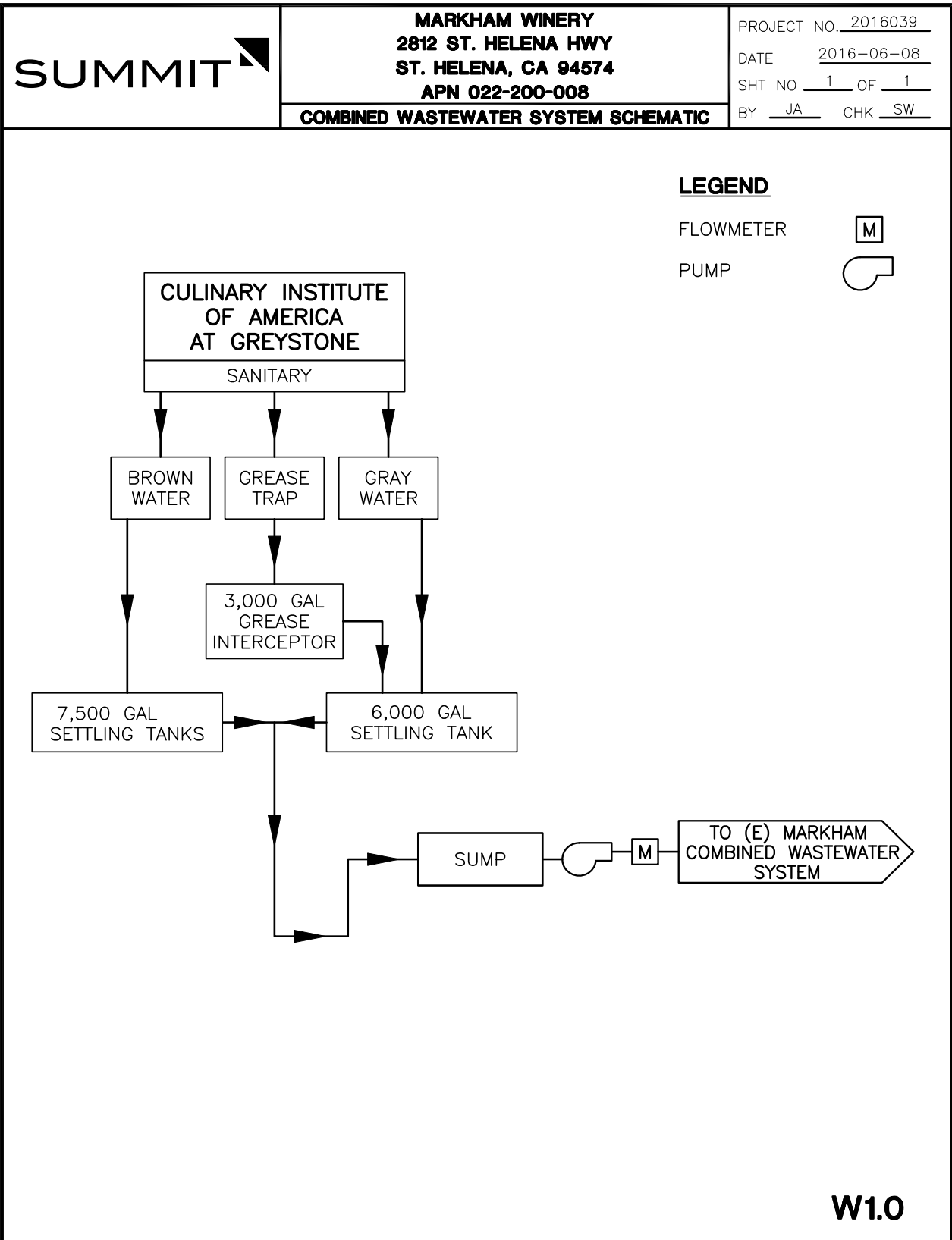
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Project No. 2016039

**ENCLOSURE A**

**WASTEWATER SYSTEM SCHEMATIC**





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CIA – Greystone  
Wastewater Feasibility Study  
June 15, 2016

**SUMMIT ENGINEERING, INC.**  
Project No. 2016039

Contact:  
Jason Roberts  
jason@summit-sr.com  
(707) 527-0775

**SUMMIT**   
**SUMMIT ENGINEERING, INC.**  
463 Aviation Blvd., Suite 200  
Santa Rosa, CA 95403  
707 527-0775  
sfo@summit-sr.com

# Attachment 1

MWELO Landscape Documentation Package prepared  
by Peter Wendt




**MWELO**

# Landscape Documentation Package

|                                   |                                   |
|-----------------------------------|-----------------------------------|
| DATE SUBMITTED: _____             |                                   |
| APPROVED <input type="checkbox"/> | REJECTED <input type="checkbox"/> |
| APPROVED BY: _____                |                                   |
| DATE: _____                       |                                   |

Effective December 1, 2015 the California Department of Water Resources has updated the Model Water Efficient Landscape Ordinance (MWELO) to increase water efficiency standards for new and retrofitted landscapes. All forms are available online in an interactive PDF format: [WEBSITE](#)

## APPLICATION

| PROPERTY INFORMATION (REQUIRED)                                                |                                                                                                              |                                                                                                                                             |                                                                     |
|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| Application Date                                                               | Are the owner and applicant the same?<br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Is the property located within the City Limits?<br><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure |                                                                     |
| Property Owner's Legal Name or Business Name<br>Culinary Institute of America  | Property Owner's Email<br>t_bensel@culinary.edu                                                              | Owner's Phone Number<br>707.967.2310                                                                                                        |                                                                     |
| Landscape Project Site Address<br>830 Pratt Ave                                | City<br>St. Helena                                                                                           | State<br>CA                                                                                                                                 | Zip Code<br>94574                                                   |
| Have you previously submitted a Landscape Documentation Package for this site? |                                                                                                              |                                                                                                                                             | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

| APPLICANT INFORMATION (REQUIRED)                 |                       |                          |                   |
|--------------------------------------------------|-----------------------|--------------------------|-------------------|
| Project Applicant Full Name or DBA<br>Tom Bensel | Phone<br>707.967.2310 | Tax ID # (if applicable) |                   |
| Email<br>t_bensel@culinary.edu                   | APN<br>009-010-024    |                          |                   |
| Mailing Address<br>2555 Main Street              | City<br>St. Helena    | State<br>CA              | Zip Code<br>94574 |

| MWELO PROJECT CRITERIA (REQUIRED)                                                                                                                                                                                                                     |                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| The State of California adopted new MWELO regulations on December 1, 2015 for full content please click <a href="#">here</a> .                                                                                                                        |                                                                     |
| 1. Does your project include <b>new</b> construction with a total landscape area greater than 500 square feet and does your project include <b>new</b> landscape construction requiring a building or landscape permit, plan check, or design review? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| 2. Does your project include rehabilitation of a landscape area greater than 2,500 square feet and does your project include rehabilitation of landscape requiring a building or landscape permit, plan check, or design review?                      | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| 3. Is your project a registered a) local, state or federal historic site b) ecological restoration or mined land reclamation project or c) botanical garden or arboretum open to the public?                                                          | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| STOP                                                                                                                                                                                                                                                  |                                                                     |
| If you have answered <b>NO</b> to both question 1 & 2 above or <b>YES</b> to question 3 your project is likely exempt from MWELO criteria, and the remaining portion of this form may not need to be completed.                                       |                                                                     |

| PROJECT DETAILS                                                  |                                                                                                                                 |             |
|------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-------------|
| What is the total landscaped area planned for your project? (LA) | 32,905                                                                                                                          | Square Feet |
| What is the total turf area planned for your project?            |                                                                                                                                 | Square Feet |
| What is the total plant area planned for your project?           |                                                                                                                                 | Square Feet |
| Type of project:                                                 | <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Other              |             |
| Type of project:                                                 | <input type="checkbox"/> Public <input checked="" type="checkbox"/> Private <input type="checkbox"/> Other                      |             |
| Type of project:                                                 | <input checked="" type="checkbox"/> New <input checked="" type="checkbox"/> Rehabilitation <input type="checkbox"/> Other       |             |
| Who is the water supplier for the project site?                  | <input checked="" type="checkbox"/> City of St. Helena <input type="checkbox"/> Other                                           |             |
| What is the water supply type for this project?                  | <input type="checkbox"/> Potable <input type="checkbox"/> Well <input type="checkbox"/> Recycled <input type="checkbox"/> Other |             |
| LANDSCAPE DOCUMENTATION PACKAGE CHECKLIST                        |                                                                                                                                 |             |

|                                                                                                           |  |                                                          |                                         |
|-----------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------|-----------------------------------------|
| The following forms and documents are required to for MWELo approval:                                     |  | <b>STAFF USE ONLY</b>                                    |                                         |
| <b>Design/Review Phase of Project</b>                                                                     |  |                                                          |                                         |
| <input type="checkbox"/> City of St. Helena MWELo Application (this form)                                 |  | <input type="checkbox"/> Submitted _____                 | <input type="checkbox"/> Complete _____ |
| <input type="checkbox"/> Water Efficient Landscape Worksheet (Appendix B of MWELo)                        |  | <input type="checkbox"/> Submitted _____                 | <input type="checkbox"/> Complete _____ |
| <input type="checkbox"/> Soil Analysis Report (Soil Management Report) ( <a href="#">Section 492.5</a> )  |  | <input type="checkbox"/> Submitted _____                 | <input type="checkbox"/> Complete _____ |
| <input type="checkbox"/> Landscape Design Plan ( <a href="#">Section 492.6</a> )                          |  | <input type="checkbox"/> Submitted _____                 | <input type="checkbox"/> Complete _____ |
| <input type="checkbox"/> Irrigation Design Plan ( <a href="#">Section 492.7</a> )                         |  | <input type="checkbox"/> Submitted _____                 | <input type="checkbox"/> Complete _____ |
| <input type="checkbox"/> Grading Design Plan ( <a href="#">Section 492.8</a> )                            |  | <input type="checkbox"/> Submitted _____                 | <input type="checkbox"/> Complete _____ |
| <input type="checkbox"/> Plant List with Water Use                                                        |  | <input type="checkbox"/> Submitted _____                 | <input type="checkbox"/> Complete _____ |
| <b>Inspection/Certification Phase of Project</b>                                                          |  |                                                          |                                         |
| <input type="checkbox"/> Certificate of Completion (Appendix C of MWELo)                                  |  | <input type="checkbox"/> Submitted _____                 | <input type="checkbox"/> Complete _____ |
| <input type="checkbox"/> Irrigation schedule ( <a href="#">Section 492.10</a> )                           |  | <input type="checkbox"/> Submitted _____                 | <input type="checkbox"/> Complete _____ |
| <input type="checkbox"/> Landscape and irrigation maintenance schedule ( <a href="#">Section 492.11</a> ) |  | <input type="checkbox"/> Submitted _____                 | <input type="checkbox"/> Complete _____ |
| <input type="checkbox"/> Landscape irrigation audit report ( <a href="#">Section 492.12</a> )             |  | <input type="checkbox"/> Submitted _____                 | <input type="checkbox"/> Complete _____ |
| <b>STAFF USE ONLY</b>                                                                                     |  |                                                          |                                         |
| Has the applicant met all MWELo requirement for design/review?                                            |  | <input type="checkbox"/> Yes <input type="checkbox"/> No | Date _____                              |
| Has the applicant met all MWELo requirement for building/inspections?                                     |  | <input type="checkbox"/> Yes <input type="checkbox"/> No | Date _____                              |
| Has the certificate of completion been issued?                                                            |  | <input type="checkbox"/> Yes <input type="checkbox"/> No | Date _____                              |

| PROPERTY OWNER/DESIGNEE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                 |       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| <p>By typing or signing my name below I certify that the information provided in this application and all additional documentation is, to the best of my knowledge, accurate and complete. I understand that any changes to the planned project will require an additional application. Additionally, I understand in order to proceed with my project I must receive approval of this form or notification of exemption and all additional documentation from the City of St. Helena. I agree to stay within the water budget (Maximum Applied Water Allowance) calculated on attached forms when irrigating this project landscape.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                 |       |
| _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | _____                                                                                                                                                                                           | _____ |
| Property Owner or Authorized Designee's Signature                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Print Name                                                                                                                                                                                      | Date  |
| SUMMARY OF MWELo PROCEDURES AND INSTRUCTIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                 |       |
| <ol style="list-style-type: none"> <li>1. Building permit/design review applicants download <i>Landscape Documentation Package</i> from <a href="#">website</a>.</li> <li>2. Applicant submits the <i>Landscape Documentation Package</i> to the Planning and Building Department included with their building permit/design review application.</li> <li>3. The Planning and Building Department sends a copy of the <i>Landscape Documentation Package</i> to Public Works to review for MWELo conformance. Staff provides comments and requests clarification where applicable.</li> <li>4. Applicant makes revisions or modification to project and <i>Landscape Documentation Package</i> as required for MWELo compliance, Public Works deems the Package complete and advises the Planning and Building Department.</li> <li>5. The Planning and Building Department issues the building permit or grants design review approval.</li> <li>6. Upon project completion, the applicant submits a signed Certificate of Completion to Public Works along with: <ol style="list-style-type: none"> <li>a. Irrigation schedule</li> <li>b. Landscape and irrigation maintenance schedule</li> <li>c. Landscape irrigation audit report</li> </ol> </li> <li>7. The City may conduct a site inspection and accepts or denies the Certificate of Completion based on information provided by applicant.</li> <li>8. When Certificate of Completion is accepted, the Public Works notifies the Planning and Building Department that the project has complied with its MWELo requirements.</li> </ol> |                                                                                                                                                                                                 |       |
| PLEASE SUBMIT PACKETS TO:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | QUESTIONS?                                                                                                                                                                                      |       |
| Planning and Building Department included with building permit/design review application                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Email: <a href="mailto:water@cityofsthenela.org">water@cityofsthenela.org</a><br>Website: <a href="http://www.cityofsthenela.org/water">www.cityofsthenela.org/water</a><br>Phone: 707-968-2745 |       |





# City of St. Helena

## Water Efficient Landscape Worksheets

This worksheet is filled out by the project applicant and it is a required element of the Landscape Documentation Package.

### Attachments:

|                                                  |                                |
|--------------------------------------------------|--------------------------------|
| Soil management or Analysis Report               | <a href="#">Section 492.5</a>  |
| Irrigation Scheduling                            | <a href="#">Section 492.10</a> |
| Schedule of Landscape and Irrigation maintenance | <a href="#">Section 492.11</a> |
| Landscape Irrigation Audit Report                | <a href="#">Section 492.12</a> |

### Definitions:

|            |                                       |                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|            | Plant List                            | Plant List should include the common or scientific name of the plant <b>and the expected water use</b> as identified by the following source, or other sources allowed by law.<br><a href="http://ucanr.edu/sites/WUCOLS/Plant_Search/">http://ucanr.edu/sites/WUCOLS/Plant_Search/</a>                                                                                                                       |
| ETo = 44.1 | Reference Evapotranspiration          | The annual evapotranspiration for the St. Helena area is 44.1 as defined by the State Department of Resources                                                                                                                                                                                                                                                                                                 |
| HA         | Hydrozone Area /Planting Description  | The landscaped area having plants with similar water needs and rooting depth, a hydrozone may be irrigated or non-irrigated. Divided into four categories: High Water Use Plants (HW), Moderate Water Use Plants (MW), Low Water Use Plants (LW), Very Low Water Use Plants (VLW)                                                                                                                             |
| LA         | Landscape Area                        | The hydrozone area in square feet                                                                                                                                                                                                                                                                                                                                                                             |
| PF         | Plant Factor (plant water use factor) | A factor, when multiplied by ETo, estimates the amount of water needed by plants. The plant factor ranges, and plant factors are determined by the Department of Water Resources 2000 publication "Water Use Classification of Landscape Species". The City of St. Helena will assume the high number for each range for plant type. Divided into four categories: HW = 0.9, MW = 0.6, LW = 0.3 and VLW = 0.1 |
| IM         | Irrigation Method                     | The type of irrigation to be used in a hydrozone use, divided into three categories: overhead spray, drip or non-irrigated                                                                                                                                                                                                                                                                                    |
| IE         | Irrigation Efficiency                 | The measurement of the amount of water beneficially used divided by the amount of water applied, 0.75 for overhead spray devices and 0.81 for drip systems                                                                                                                                                                                                                                                    |
| ETAF       | Estimate Total Adjustment Factor      | A factor of the Plant Factor divided by the Irrigation Efficiency (PF/IE) Regular landscape areas must be of 0.55 or below for residential and 0.45 or below for non-residential areas, when applied to ETo adjusts for plant factor and irrigation efficiency                                                                                                                                                |
| SLA        | Special Landscape Area                | An area of the landscape dedicated solely to edible plants, recreational area, areas irrigated with recycled water or water features using recycled water                                                                                                                                                                                                                                                     |
| ETWU       | Estimated Total Water Use             | The estimated water use (in gallons per year) that the project would use for the landscape based on plant selection and irrigation efficiency. Where .62 is a conversion factor that converts acre inches per acre per year to gallon per square foot per year.<br><b><math>ETo \times .62 \times ETAF \times LA = ETWU</math> (gallons per year)</b>                                                         |
|            | Planting Description                  | Provide details on the location of the area, reference plans or common names.<br><i>i.e.</i> Front Lawn, back north east of property                                                                                                                                                                                                                                                                          |
| MAWA       | Maximum Applied Water Allowance       | The upper limit of the annual applied water for the established landscaped area. The ETWU should not exceed the MAWA.<br><b><math>(ETo) (0.62) [(ETAF \times LA) + ((1) \times SLA)] = MAWA</math></b>                                                                                                                                                                                                        |

# City of St. Helena Water Efficient Landscape Worksheets

## Section A: HYDROZONE INFORMATION TABLE

Please complete the hydrozone table(s) for each hydrozone. Use as many tables as necessary to provide the information for each landscape area per hydrozone. If you have more than ten hydrozones, please attach additional page(s) with your application as necessary to complete hydrozone information for all portions of your project and calculation of your project's Estimated Total Water Use (ETWU).

1. The plant factor used shall be from sources identified above or other sources allowed by law
2. Individual hydrozones that mix plants of moderate and low water use shall use the higher water using plant factor
3. Use 44.1 as the ETo for the City of St. Helena
4. \*ETAF must be below .55 for residential and below .45 for non-residential

| Regular Landscape Areas |                      |              |                   |                       |                                  |                               |                                                      |
|-------------------------|----------------------|--------------|-------------------|-----------------------|----------------------------------|-------------------------------|------------------------------------------------------|
| Hydrozone Area          | Planting Description | Plant Factor | Irrigation Method | Irrigation Efficiency | Estimate Total Adjustment Factor | Landscape Area (LA) (sq. ft.) | ETAF x Area                                          |
| HA                      | Planting Description | PF           | IM                | IE                    | ETAF* (PF/IE) = ETAF             |                               | ETWU (gallons per year) ETo x .62 x ETAF x LA = ETWU |
| e.g. V/LW               | Northeast Corner     | .1           | Drip              | .81                   | (.1/.81) = .12                   | 650                           | (.12x650)=78                                         |
| H1                      | N. END PARKING       | .3           | DRIP              | .81                   | .243                             | 1650                          | 401                                                  |
| H2                      | N. PKG ISLANDS       | .3           | DRIP              | .81                   | .243                             | 1510                          | 353                                                  |
| H3                      | W. END VYD. LG.      | .3           | DRIP              | .81                   | .243                             | 1440                          | 350                                                  |
| H4                      | N. SIDE VYD. LG.     | .3           | DRIP              | .81                   | .243                             | 1200                          | 292                                                  |
| H5                      | E. END VYD. LG.      | .3           | DRIP              | .81                   | .243                             | 1855                          | 451                                                  |
| H6                      | N. SIDES A & D       | .3           | DRIP              | .81                   | .243                             | 1495                          | 363                                                  |
| H7                      | S. END BLDG. A       | .3           | DRIP              | .81                   | .243                             | 1365                          | 332                                                  |
| H8                      | S. SIDES A & D       | .3           | DRIP              | .81                   | .243                             | 1545                          | 375                                                  |
| H9                      | COURTYARD N.         | .7           | O/H SPRAY         | .81                   | .567                             | 990                           | 561                                                  |
| H10                     | COURTYARD S.         | .7           | O/H SPRAY         | .81                   | .567                             | 1100                          | 624                                                  |
| H11                     | W. SIDE BLDG. B      | .3           | DRIP              | .81                   | .243                             | 1375                          | 334                                                  |
| H12                     | CTYD. / BLDG. C      | .3           | DRIP              | .81                   | .243                             | 1740                          | 423                                                  |
| H13                     | W. END BLDG. C       | .3           | DRIP              | .81                   | .243                             | 1430                          | 347                                                  |
| H14                     | SW BLDG. C           | .3           | DRIP              | .81                   | .243                             | 1390                          | 338                                                  |
| H15                     | SE BLDG. C           | .3           | DRIP              | .81                   | .243                             | 1395                          | 339                                                  |
| H16                     | NE BLDG. B           | .3           | DRIP              | .81                   | .243                             | 1740                          | 423                                                  |
| CONT'D NEXT PAGE        |                      |              |                   |                       |                                  |                               |                                                      |
| SUBTOTALS               |                      |              |                   |                       |                                  | C                             | D                                                    |
|                         |                      |              |                   |                       |                                  |                               | F                                                    |

MWEL0

Updated 2/4/2016

Page 4 of 6

## City of St. Helena Water Efficient Landscape Worksheets

## Section A: HYDROZONE INFORMATION TABLE

Please complete the hydrozone table(s) for each hydrozone. Use as many tables as necessary to provide the information for each landscape area per hydrozone. If you have more than ten hydrozones, please attach additional page(s) with your application as necessary to complete hydrozone information for all portions of your project and calculation of your project's Estimated Total Water Use (ETWU).

1. The plant factor used shall be from sources identified above or other sources allowed by law.
2. Individual hydrozones that mix plants of moderate and low water use shall use the higher water using plant factor.
3. Use 44.1 as the ETo for the City of St. Helena.
4. \*ETAF must be below .55 for residential and below .45 for non-residential.

| Regular Landscape Areas |                      |              |                   |                       |                                        |                               |
|-------------------------|----------------------|--------------|-------------------|-----------------------|----------------------------------------|-------------------------------|
| Hydronic Area           | Planting Description | Plant Factor | Irrigation Method | Irrigation Efficiency | Estimate Total Adjustment Factor       | Landscape Area (LA) (sq. ft.) |
| HA                      | Planting Description | PF           | IM                | IE                    | ETAF*<br>(PE/IE) = ETAF                | ETAF x Area                   |
| e.g.<br>[1]LW           | Northeast Corner     | 1            | Drip              | .81                   | $((.1/.81)) = .12$                     | $(.12 \times 650) = 78$       |
| H17                     | SE BLDG. B           | .3           | DRIP              | .81                   | .243                                   | 1695                          |
| H18                     | S END BLDG. B        | .3           | DRIP              | .81                   | .243                                   | 1730                          |
| H19                     | E SIDE TREES         | .3           | DRIP              | .81                   | .243                                   | 200                           |
| H20                     | CTYD. TREES          | .3           | DRIP              | .81                   | .243                                   | 200                           |
| H21                     | E VYD. LODGE         | .3           | DRIP              | .81                   | .243                                   | 1945                          |
| H22                     | S VYD. LODGE         | .3           | DRIP              | .81                   | .243                                   | 1720                          |
| H23                     | TRASH ENCL.          | .3           | DRIP              | .81                   | .243                                   | 1995                          |
| H24                     | MTR. CT. TREES       | .3           | DRIP              | .81                   | .243                                   | 200                           |
| TOTALS                  |                      |              |                   |                       | A                                      | 32,905                        |
|                         |                      |              |                   |                       | Special Landscape Area (SLA) (sq. ft.) |                               |
| Special Landscape Areas |                      |              |                   |                       |                                        |                               |
|                         |                      | N/A          | N/A               | N/A                   | 1                                      |                               |
|                         |                      | N/A          | N/A               | N/A                   | 1                                      |                               |
|                         |                      | N/A          | N/A               | N/A                   | 1                                      |                               |
|                         |                      | N/A          | N/A               | N/A                   | 1                                      |                               |
|                         |                      | N/A          | N/A               | N/A                   | 1                                      |                               |
| SUBTOTALS               |                      |              |                   |                       | C                                      | 0                             |
|                         |                      |              |                   |                       | D                                      | 0                             |
|                         |                      |              |                   |                       | E                                      | 0                             |

### Section B: Calculations

Use the subtotal calculations from Section A to complete the following:

|                                                                                                        |         |           |
|--------------------------------------------------------------------------------------------------------|---------|-----------|
| 1. What is the Average ETAF for regular landscape area of your project?<br>(B÷A) = Average ETAF        | .26     | Ave ETAF  |
| 2. What is the sitewide ETAF for your project?<br>(B+D)÷(A+C) = sitewide ETAF                          | .26     | Site ETAF |
| 3. What is the MAWA (Maximum Applied Water Allowance) for your project?<br>(44.1) (.62) (B + D) = MAWA | 236,809 | MAWA      |
| 4. What is the ETWU total for your project? (E+F) = Total ETWU                                         | 236,821 | ETWU      |

If you feel this worksheet does not reflect the annual Maximum Applied Water Allowance (MAWA) for your project, please explain in the box below.

### Thank you for completing your Water Efficient Landscape Worksheet!

Please remember your Landscape Documentation Package **IS NOT COMPLETE** until all of the necessary attachments have been received (see top of page 3). After you submit your application to the City of St. Helena for review and approval, and the irrigation and landscape is installed, a **Certificate of Completion** is required to verify compliance with the ordinance.



# City of St. Helena

## Certificate of Completion

| PROPERTY INFORMATION                         |              |                                                                                                                                   |                      |
|----------------------------------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------|
| Date                                         | Project Name | Has the Landscape Documentation Package for this site been completed?<br><input type="checkbox"/> Yes <input type="checkbox"/> No |                      |
| Property Owner's Legal Name or Business Name |              | Property Owner's Email                                                                                                            | Owner's Phone Number |
| Landscape Project Site Address               |              | City                                                                                                                              | State      Zip Code  |

| APPLICANT INFORMATION              |  |       |                          |
|------------------------------------|--|-------|--------------------------|
| Project Applicant Full Name or DBA |  | Phone | Tax ID # (if applicable) |
| Email                              |  | APN   |                          |
| Mailing Address                    |  | City  | State      Zip Code      |

| PROPERTY OWNER                                                                                                                                                                                                                                                                                                                 |                     |               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------|
| By typing or signing my name below I/we certify that I/we have received copies of all the documents within the Landscape Documentation Package and the Certificate of Completion and that it is our responsibility to see that the project is maintained in accordance with the Landscape and Irrigation Maintenance Schedule. |                     |               |
| _____<br>Property Owner or Authorized Designee's Signature                                                                                                                                                                                                                                                                     | _____<br>Print Name | _____<br>Date |

| PROPERTY OWNER QUESTIONNAIRE                                                                                                                     |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 1. Date the Landscape Documentation Package was submitted to the City of St. Helena:                                                             |  |
| 2. Date the Landscape Documentation Package was approved by the City of St. Helena:                                                              |  |
| 3. Date that a copy of the Water Efficient Landscape Worksheet (including the Water Budget Calculation) was submitted to the City of St. Helena: |  |

| CERTIFICATION OF INSTALLATION                                                                                                                                                                                                                                                                                      |  |                                  |                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------|---------------------|
| Name**                                                                                                                                                                                                                                                                                                             |  | Phone                            |                     |
| Company                                                                                                                                                                                                                                                                                                            |  | Title                            |                     |
| Email                                                                                                                                                                                                                                                                                                              |  | License No. or Certification No. |                     |
| Mailing Address                                                                                                                                                                                                                                                                                                    |  | City                             | State      Zip Code |
| By typing or signing my name below I/we certify that based upon periodic site observations, the work has been completed in accordance with the ordinance and that the landscape planting and irrigation installation conforms with the criteria and specification of the approved Landscape Documentation Package. |  |                                  |                     |
| _____<br>Property Owner or Authorized Designee's Signature                                                                                                                                                                                                                                                         |  | _____<br>Print Name      Date    |                     |
| ** Signer of the Landscape design plan, signer of the irrigation plan or a licensed landscaper contractor.                                                                                                                                                                                                         |  |                                  |                     |

| REQUIRED ATTACHMENTS                                                                                     |
|----------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> IRRIGATION SCHEDULING (per ordinance Section 492.10)                            |
| <input type="checkbox"/> SCHEDULE OF LANDSCAPE AND IRRIGATION MAINTENANCE (per ordinance Section 492.11) |
| <input type="checkbox"/> LANDSCAPE IRRIGATION AUDIT REPORT (per ordinance Section 492.12)                |
| <input type="checkbox"/> SOIL MANAGEMENT or ANALYSIS REPORT (per ordinance Section 492.6)                |





**PHASE I ENVIRONMENTAL  
SITE ASSESSMENT  
APN 009-010-024  
830 PRATT AVENUE  
ST. HELENA, CALIFORNIA**

December 15, 2003

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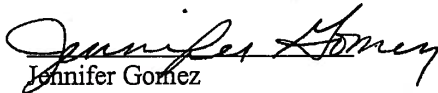


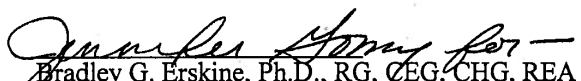
A Report Prepared for:

Ms. Lynn Sletto  
Meibeyer Law Group  
1236 Spring Street  
St. Helena, CA 94574

**PHASE I ENVIRONMENTAL  
SITE ASSESSMENT  
APN 009-010-024  
830 PRATT AVENUE  
ST. HELENA, CALIFORNIA**

Kleinfelder Job No: 38603  
December 15, 2003

  
Jennifer Gomez  
Project Manager

  
Bradley G. Erskine, Ph.D., RG, CEG, CHG, REA  
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38603/FLD3R096

Page ii of iv

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- A. Plates
  - 1 Site Vicinity Map
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- B Historical Research Documentation:
  - Aerial Photograph(s)
  - Sanborn Map Review
  - City Directories
- C EDR report
- D Application for Authorization to Use

## 1. SUMMARY

---

A Phase I Environmental Site Assessment (ESA) was conducted for property located at 830 Pratt Avenue in St. Helena, California (Plate 1). The parcel is hereafter referred to as the "subject site".

The subject site consists of a convalescent hospital. There are two structures located on site. There is no evidence of prior use or disposal of hazardous materials was found during the investigation.

Kleinfelder's Phase I ESA of the subject site revealed no Recognized Environmental Conditions at the site.

These conclusions and a summary of our findings are discussed in greater detail in Chapter 7. This report is subject to the limitations explained in Chapter 8.

## 2. INTRODUCTION

---

Meibeyer Law Group retained Kleinfelder to conduct a Phase I ESA of the property located at 830 Pratt Avenue in St. Helena, California; referred to herein as the "site." The purpose of this assessment is to assist the client in evaluating Recognized Environmental Conditions regarding known or suspected releases of hazardous substances on or near the subject site. A Recognized Environmental Condition is defined by the American Society of Testing and Materials (ASTM) *Standard Practice for Phase I Environmental Site Assessments, Phase I Environmental Site Assessment Process* (E1527-00), as "the presence or likely presence of hazardous substances or petroleum products under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater or surface water of the property." Kleinfelder performed this Phase I ESA in accordance with the scope and limitations of the ASTM standard and our authorized proposal and contract 41-YP3-813 dated November 21, 2003.

### 2.1 REPORT FORMAT

The following sections describe Kleinfelder's work scope:

- Section 3, **Site Setting**, is a compilation of information concerning the site's location, physical setting, and geologic and hydrogeologic conditions.
- Section 4, **History of the Site**, summarizes the history of land use at the site and on adjoining properties. The history was developed by conducting interviews, reviewing information provided to Kleinfelder by the client and by consulting various resources such as aerial photographs, agency files, and historic maps.
- Section 5, **Records Review**, is a compilation of Kleinfelder's review of several databases available from the Federal, State, and local regulatory agencies regarding hazardous substance use, storage, or disposal at the subject site; and for off-site facilities up to a one-mile radius around the site. This chapter includes interviews with the owner.
- Section 6, **Site Reconnaissance**, describes Kleinfelder's site observations during the site reconnaissance and observations of adjacent parcels.
- Section 7, **Findings and Conclusions**, is a presentation of our findings and conclusions regarding the information in Chapters 3 through 6; and presents our opinion regarding the presence of Recognized Environmental Conditions of concern at the site.
- Section 8 presents our **Limitations**.

### 3. SITE SETTING

---

This section describes the condition of the site at the time the Phase I ESA was conducted and provides information about local geologic conditions that can affect the migration of contaminants in soil and groundwater.

#### 3.1 SITE DESCRIPTION

The site is located at 830 Pratt Avenue in St. Helena, California (Plate 1). The subject site consists of a convalescent hospital (Marlina Convalescent Hospital). There is one main hospital building and one out building on site which is used for laundry and storage. The topography in the area is flat.

Surrounding land use consists of vineyards and residential properties.

The information presented in Table 3.1 describes the physical location of the subject site. This information was obtained from maps, public records, and interviews.

**TABLE 3.1: SITE SETTING**

| <b>DESIGNATION</b>                                                                                                                                             | <b>DESCRIPTION</b>                                                                                                                                                                                                               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Address</b>                                                                                                                                                 | 830 Pratt Avenue<br>St. Helena, CA                                                                                                                                                                                               |
| <b>Location</b>                                                                                                                                                | East of Highway 29, north side of Pratt Avenue.                                                                                                                                                                                  |
| <b>Township &amp; Range</b>                                                                                                                                    | Township 8 North, Range 6 West (This area is not sectioned), Mount Diablo Baseline and Meridian.                                                                                                                                 |
| <b>Assessor's Parcel Number</b>                                                                                                                                | 009-010-024                                                                                                                                                                                                                      |
| <b>Approximate Acreage</b>                                                                                                                                     | 2.61 acres                                                                                                                                                                                                                       |
| <b>Current Use</b>                                                                                                                                             | Marlina Convalescent Hospital                                                                                                                                                                                                    |
| <b>Potable Water Supply</b>                                                                                                                                    | City of St. Helena                                                                                                                                                                                                               |
| <b>Waste Water System</b>                                                                                                                                      | City of St. Helena                                                                                                                                                                                                               |
| <b>USGS TOPOGRAPHIC QUADRANGLE</b><br>St. Helena, California 7.5 Minute Series. 1960, photorevised 1993                                                        | The site is mapped on the St. Helena, California 7.5 Minute Series Quadrangle with an average elevation of 260 feet above sea level. The subject site is shown as two structures. The remaining portions of the site are vacant. |
| <b>MUNGER MAP</b><br>( <a href="ftp://ftp.consrv.ca.gov/pub/oil/maps/Dist6/W6-4/MapW6-4.pdf">ftp://ftp.consrv.ca.gov/pub/oil/maps/Dist6/W6-4/MapW6-4.pdf</a> ) | No oil and gas wells or plugged and abandoned dry holes were depicted on site.                                                                                                                                                   |

### 3.2 SITE SOILS

According to the Soil Survey of Napa County soils at the site are mapped as Brentwood clay loam.

The soil consists of slopes from 0 to 5 percent. Permeability is moderately slow and the soil is well drained.



### 3.3 REGIONAL AND LOCAL GEOLOGY

#### 3.3.1 Regional Geology

The site lies within the Coast Range Geologic Province of California. This province is characterized by northwest trending mountain ranges and intervening valleys, which are a reflection of the dominant northwest structural trend in bedrock of the region. The basement rock in the northwest portion of this province is dominantly highly deformed sedimentary, metamorphic and volcanic rock of the Franciscan Complex of Upper Jurassic to Cretaceous Age.

#### 3.3.2 Local Geology

In the site vicinity, quaternary alluvial deposits have overlain this area locally (USGS, Santa Rosa Quadrangle, 1992).

### 3.4 GROUNDWATER

There are no published maps or data reports for groundwater flow direction in this area. General groundwater depth and direction may be influenced by local pumping, rainfall, and irrigation patterns. Evaluation of such factors is beyond the scope of this assessment.

#### 4. HISTORY OF THE SITE

The history of the site was researched to identify obvious uses of the site from the present to first developed use or back to 1940, whichever is earlier. The objective was to evaluate the likelihood that past uses resulted in Recognized Environmental Conditions. Table 4.1 summarizes the information reviewed during this assessment. Kleinfelder used this information to establish the site history.

**TABLE 4.1: HISTORICAL INFORMATION REVIEWED**

| HISTORICAL SOURCE                  | YEARS REVIEWED                                                                         | AVAILABILITY                                                        |
|------------------------------------|----------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| <b>Aerial Photographs</b>          | 1957, 1965, 1968, 1975, 1981, 1988, 1993, 1995, 1997 and 2000.                         | Pacific Aerials, Oakland, CA and Environmental Data Resources, Inc. |
| <b>Topographic Maps</b>            | 1945, 1960, 1980, and 1993.                                                            | Environmental Data Resources, Inc.                                  |
| <b>Sanborn Fire Insurance Maps</b> | No Coverage.                                                                           | Environmental Data Resources, Inc.                                  |
| <b>City Directories</b>            | Polk: 1961, 1965, 1970 and 1975.<br><br>Haines: 1980, 1985, 1990, 1995, 1999 and 2003. | Environmental Data Resources, Inc.                                  |
| <b>Interview(s)</b>                | 2003                                                                                   | Mr. Matt Demchuck, administrator                                    |

#### 4.1 AERIAL PHOTOGRAPHS

##### 1957

A single-family residence and an outbuilding are located on site. The remaining portions of the site are vineyards. The surrounding land use is rural residential and agricultural (vineyards). Railroad tracks are located adjacent to the west border.

##### 1965

A single family residence and two large outbuildings are located on site. The remaining portions of the site are vineyards. The surrounding land use is rural residential and agricultural. The railroad tracks are present.

##### 1968

There are two structures located on site. The structures appear to be the present day convalescent hospital and an outbuilding. The remaining portions of the site are vacant. The surrounding land use is vacant fields and rural residential properties. The railroad tracks are present.

##### 1975 and 1981

The convalescent hospital and outbuilding are shown on site. The remaining portions of the site are vacant. A cleared dirt area is located along the south border of the site. This area appears to be cleared for the future parking lot development. The surrounding land use are vacant fields and rural residential. Waste water ponds are located adjacent to the north corner of the subject site. The railroad tracks are present.

##### 1988 and 1993

The subject site is shown as the convalescent hospital and outbuilding. A paved parking lot is located to the east of the hospital. The northern one-half of the site is vacant. The surrounding land use is agricultural, waste water ponds, rural residential and railroad tracks.

##### 1995, 1997 and 2000

The 1995, 1997 and 2000 aerial photographs are essentially unchanged from the 1988 and 1993 photographs, however, a mound is located in the north corner of the subject site.

#### 4.2 HISTORICAL TOPOGRAPHIC MAPS

##### **St. Helena, 15 Minute Series, 1902, 1 inch = 5,208 feet**

There is a single structure located on site. The remaining portions of the site are vacant.

##### **St. Helena, 15 Minute Series, 1960, 1 inch = 5,208 feet**

There are two structures located on site. The remaining portions of the site are shown as vineyards.

##### **St. Helena, 7.5 Minute Series, 1960, 1 inch = 2,000 feet**

There are two structures located on site. The remaining portions of the site are shown as vineyards.

##### **St. Helena, 7.5 Minute Series, 1960 photorevised 1980, 1 inch = 2,000 feet**

There are two structures located on site. The remaining portions of the site are shown as vineyards.

##### **St. Helena, 7.5 Minute Series, 1960 photorevised 1993, 1 inch = 2,000 feet**

There are two structures on site. The remaining portions of the site are shown as vacant.

#### 4.3 CITY DIRECTORIES

Polk City Directory does not have the street or site addresses listed in the 1961 through 1975 directories. The Haines Criss Cross Directory does list the site as a residence from 1980 to 1995 and the Marlina Convalescent Hospital from 1999 to 2003.

#### 4.4 INTERVIEWS

##### *Mr. Matt Demchuck, administrator for convalescent hospital*

Mr. Demchuck has been the administrator on site for approximately 8 years. He stated that the hospital was built in two phases in the 1960's. Mr. Demchuck has been the administrator on site for approximately 8 years. A generator with a diesel backup is located to the east of the building. The associated oil is replaced every few years and disposed of properly. Mr. Demchuck stated that oxygen tanks are stored on site. These tanks are on permit with the county. Mr. Demchuck

stated that the asphalt, concrete, and soil pile in the north end of the property originated from the landscape work conducted on the south border of the site. The subject site has three septic tanks on site, two large tanks and one small tank. The site is presently connected to city sewer and the tanks are no longer used. The site is also connected to the city water system. There are no wells located on site. There are no hazardous materials stored on site.

## 5. RECORDS REVIEW

### 5.1 REGULATORY AGENCY DATABASE REVIEW

The purpose of the records review is to obtain and review records that would help to reveal Recognized Environmental Conditions at or in the area around site.

Federal, State and local regulatory agencies publish databases or "lists" of businesses and properties that handle hazardous materials or waste, or are known locations of a release of hazardous substances. These databases are available for review or purchase at the regulatory agencies, or they can be obtained through a commercial database service. Kleinfelder contracted with a commercial database service, Environmental Data Resources, Inc., to review the agency lists for references to the site and any listings within the appropriate ASTM minimum search distance from the site. The executive summary and maps from the database search report are included in Appendix A, Regulatory Agency Database Summary. The Federal and State databases reviewed are summarized on Table 5.1.

**TABLE 5.1: RECORDS REVIEWED/SEARCH DISTANCES**

| LIST           | SEARCH RADIUS   | FINDINGS     |
|----------------|-----------------|--------------|
| <b>FEDERAL</b> |                 |              |
| NPL            | 1 - mile        | None Listed. |
| CERCLIS        | ½ - mile        | None Listed. |
| CORRACTS       | 1 - mile        | None Listed. |
| RCRIS-TSD      | ½ - mile        | None Listed. |
| RCRIS-GEN      | ¼ - mile        | None Listed. |
| ERNS           | Target Property | None Listed. |
| <b>STATE</b>   |                 |              |
| BEP, AWP       | 1 - mile        | None Listed. |
| CAL-SITES      | 1 - mile        | None Listed. |
| CORTESE        | 1 - mile        | 3 Listed.    |
| LUST           | ½ - mile        | 3 Listed.    |
| UST            | ½ - mile        | None Listed. |
| SLIC           | ½ - mile        | None Listed. |
| SWIS           | ¾ - mile        | None Listed. |

A summary of facilities listed in the databases is presented in the executive summary of the EDR report, and each facility is cross-referenced with a radius map showing the location of the listed facility with respect to the subject property. Kleinfelder conducted a review of the EDR report to assess which listings have a significant potential to impact the subject property. Factors used to screen the listed properties include distance to the site, geology, presumed or known direction of groundwater flow, type and magnitude of hazardous material release, and nature of sensitive receptors. Those considered to have a significant potential to impact the site were then subjected to a file review at appropriate regulatory agencies. Based on the review of the EDR report, there are no on site or adjacent facilities which may have a potential to impact the subject property. A copy of the EDR report is included in Appendix C of this report.

The database report shows that:

- The subject site not listed in the databases referenced above.
- Three Leaking Underground Storage Tank (LUST) sites are located within ½ mile of the subject site (these sites are also listed on the CORTESE database).
  1. Beringer Vineyards (200 Main Street) – This facility is approximately 1,600 feet southwest of the subject site. This facility was impacted by miscellaneous motor vehicle fuels. The county closed the case on June 27, 1997. Due to the closed status of this facility, it is Kleinfelder's opinion that this facility does not pose an adverse impact to the subject site.
  2. Abruzzini Property (1030 Fulton Lane) – This facility is located approximately 2,000 feet southeast of the subject site. The soil at this facility was impacted by gasoline. The county closed the case on May 15, 1992. Due to the closed status of this facility, it is Kleinfelder's opinion that this facility does not pose an adverse impact to the subject site.
  3. Helen Paschich Estate (1078 Fulton Avenue) – This facility is located approximately 2,100 feet southeast of the subject site. The soil at this facility was impacted by miscellaneous motor vehicle fuels. The county closed the case on December 10, 1992. Due to the closed status of this facility, it is Kleinfelder's opinion that this facility does not pose an adverse impact to the subject site.

## 5.2 REGULATORY AGENCY CONTACTS

Local and state regulatory agencies were contacted for reasonably ascertainable and practically reviewable information regarding Recognized Environmental Conditions present at or adjacent to the site. The information was obtained by interviewing agency representatives or reviewing local agency records.

**TABLE 5.2: AGENCY CONTACTS SUMMARY**

| AGENCY                                                                          | TYPE OF INFORMATION AND RESULTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Napa County Department of Environmental Management (NCDEM)</b>               | Kleinfelder did contact NCDEM, for the following properties: the subject site (830 Pratt Avenue) and the adjacent property to the west (1000 Pratt Avenue). According to Ms. Pam Johnston of NCDEM the only file available was for 1000 Pratt Avenue facility. A gas cylinder leaked in April of 1991 and no further action was required for this incident. In addition, Kleinfelder reviewed the waste water pond file for the 1000 Pratt Avenue facility. This property is owner by Beringer Winery. The ponds adjacent to the subject site are aerated treatment ponds. There was no additional information concerning the ponds within the file. |
| <b>Napa County Agricultural Commissioner's Office (NCACO)</b>                   | According to the agricultural commissioner's office, pesticide and herbicide reports are kept on file for approximately 2 years by the agricultural commissioner's office. Due to the subject site not being used for agricultural purposes in the past 2 years, information was not requested for this site.                                                                                                                                                                                                                                                                                                                                        |
| <b>California State Fire Marshal Pipeline Safety Office (CSFMPO)</b>            | Kleinfelder contacted the CSFM via fax. A response from the CSFM was not made available to Kleinfelder before the production of this report. If the information obtained changes the conclusions given within this report an addendum will be issued.                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>State of California, Department of Conservation, Division of Oil and Gas</b> | No oil or gas wells are depicted on or adjacent to the subject site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |



## 6. SITE RECONNAISSANCE

---

Kleinfelder representative, Jennifer Gomez, conducted a site reconnaissance on December 5, 2003, to assess and photograph present site conditions. The approximate parcel and site boundaries are shown on Plate 2 and color photographs of the site are shown on Plate 3. The 2000 aerial photograph of the subject site is shown on Plate 4. Site conditions discussed below are limited to readily apparent environmental conditions observed on the date of site reconnaissance.

### 6.1 ON-SITE OBSERVATIONS

The subject site consists primarily of a convalescent hospital. Kleinfelder did not access the occupied areas within the hospital. Kleinfelder did observe the oxygen tank storage area. An outbuilding is located to the north of the main hospital building. The outbuilding is used for storage and laundry activities. Located within the storage portion of the outbuilding are autoparts stored on shelves and other miscellaneous items (i.e. tools, ladders, etc.). The area adjacent to the outbuilding has storage of hospital supplies, linen storage bins, wood pallets, and a boat. There does not appear to be evidence of hazardous material storage in this area. A paved parking lot is located to the east of the main hospital building and the northern one-half portion of the subject site consists of a vacant grass field. A mound containing asphalt, concrete, unearthed trees/shrubs and soil is located in the north corner of the subject site. The mound appears to have originated from the subject site. Two propane tanks are located on the west side of the paved parking lot. In addition, a generator is located in this area. A small amount of oil staining was observed near the generator, which is housed on a concrete walkway.

Site observations are tabulated in Table 6.1.

TABLE 6.1: SITE OBSERVATIONS

| General Observations                                                      | Remarks                                      | Observed | Not Observed |
|---------------------------------------------------------------------------|----------------------------------------------|----------|--------------|
| Hazardous chemical and petroleum products in connection with known use.   |                                              |          | X            |
| Fill dirt from an unknown source.                                         |                                              |          | X            |
| Aboveground storage tanks (ASTs)                                          | There are two propane tanks located on site. | X        |              |
| Underground storage tanks (USTs)                                          |                                              |          | X            |
| Odors                                                                     |                                              |          | X            |
| Pools of Liquid                                                           |                                              |          | X            |
| Drums                                                                     |                                              |          | X            |
| Hazardous chemical and petroleum products in connection with unknown use. |                                              |          | X            |
| Unidentified substance containers                                         |                                              |          | X            |

TABLE 6.1 (CONTINUED)  
SITE OBSERVATIONS

| Interior and exterior observations or environmental conditions that may involve the use, storage, disposal or generation of hazardous substances or petroleum products. |                                                                                            | Observed | Not Observed |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|----------|--------------|
| Chemical storage or agricultural chemical mixing areas                                                                                                                  |                                                                                            |          | X            |
| Asbestos, and lead based paints                                                                                                                                         | Due to the age of the structures asbestos and/or lead based paints may be present on site. |          | X            |
| Polychlorinated biphenyls (PCBs)                                                                                                                                        |                                                                                            |          | X            |
| Pits, Ponds, or Lagoons                                                                                                                                                 |                                                                                            |          | X            |
| Stained soil or pavement                                                                                                                                                | A small amount of oil staining was present near the generator.                             | X        |              |
| Stressed vegetation                                                                                                                                                     |                                                                                            |          | X            |
| Hazardous Waste Storage                                                                                                                                                 |                                                                                            |          | X            |
| Solid Waste                                                                                                                                                             |                                                                                            |          | X            |
| Waste Water                                                                                                                                                             |                                                                                            |          | X            |
| Process waste water                                                                                                                                                     |                                                                                            |          | X            |
| Wells                                                                                                                                                                   |                                                                                            |          | X            |
| Dry wells                                                                                                                                                               |                                                                                            |          | X            |

**TABLE 6.1 (CONTINUED)**  
**SITE OBSERVATIONS**

| Interior and exterior observations or environmental conditions that may involve the use, storage, disposal or generation of hazardous substances or petroleum products. |                                                                                                                                      | Observed | Not Observed |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|----------|--------------|
| Surface water                                                                                                                                                           |                                                                                                                                      |          | X            |
| Storm basins/catch                                                                                                                                                      |                                                                                                                                      |          | X            |
| Storm drains                                                                                                                                                            |                                                                                                                                      |          | X            |
| Drains and sumps                                                                                                                                                        |                                                                                                                                      |          | X            |
| Septic system                                                                                                                                                           | There are three septic tanks located on site. The exact location of the tanks are unknown. These tanks are not being used presently. |          | X            |
| Loading and unloading areas                                                                                                                                             |                                                                                                                                      |          | X            |
| Burned or buried debris                                                                                                                                                 |                                                                                                                                      |          | X            |

## 6.2 OFF-SITE OBSERVATIONS

Kleinfelder conducted a brief drive-by survey of the parcels adjacent to the site on the same day as the site reconnaissance. A summary of the off-site properties is summarized in the following table:

**TABLE 6.2**  
**SURROUNDING PROPERTIES**

|              |                                                                      |
|--------------|----------------------------------------------------------------------|
| <b>North</b> | Waste water ponds, railroad tracks, and vineyards.                   |
| <b>South</b> | Pratt Avenue, beyond which is a rural residence.                     |
| <b>East</b>  | A dirt drive path, beyond which is a vineyard and waste water ponds. |
| <b>West</b>  | Railroad tracks beyond which is a vineyard.                          |

## 7. CONCLUSIONS

---

Kleinfelder performed this Phase I ESA in accordance with the scope and limitations of ASTM Practice E1527-00. The purpose of this assessment was to evaluate the likelihood of Recognizable Environmental Conditions resulting from the present or past usage, storage, or disposal of hazardous substances or petroleum hydrocarbons at the subject site and in the surrounding area. Kleinfelder's findings and conclusions are presented below.

### 7.1 FINDINGS

Kleinfelder's Phase I ESA of the subject site revealed no Recognized Environmental Conditions at the site.

### 7.2 OTHER ISSUES

There are six issues of environmental concern for the subject site.

- A small amount of oil staining was observed on the pavement near the generator and on the concrete floor of the storage outbuilding. The oil staining appears to meet the definition of a "*de minimus*" condition under ASTM.
- Three septic systems are located on site. The exact location is unknown. These tanks are not presently used due to the fact that the site is connected to the city sewer system. The tanks should be properly abandoned in accordance with applicable regulations.
- Railroad tracks are located adjacent to the subject site. Various pesticides, herbicides, or waste oil may have been used for weed control along the railroad tracks. If desired, soil sampling can be conducted to verify whether or not contamination is present.
- Waste water ponds are located adjacent to the northeast of the subject site. Kleinfelder was not able to reasonably ascertain specific information concerning these ponds. It is Kleinfelder's experience that waste water ponds associated with the large wineries are permitted and are monitored regularly; however, regulatory compliance was beyond the scope of this assessment.
- Kleinfelder did not receive a response concerning pipelines within the area from the CSFM office prior to the production of this report. If the information obtained by Kleinfelder changes the conclusions given within this report an addendum will be issued.

- The 1957 and 1965 aerial photographs of the site show a single-family residence and out buildings. Information was not readily available due to the age of the structure. It is unknown if subsurface structures (i.e. septic tank, water well, underground storage tank) are present.

### 7.3 CONCLUSIONS

Kleinfelder's assessment of the site revealed no Recognized Environmental Conditions related to the subject site.

## 8. LIMITATIONS

Phase I ESAs are non-comprehensive by nature and are unlikely to identify all environmental problems or eliminate all risk. The attached report is a qualitative assessment. Kleinfelder offers a range of investigative and engineering services to suit the needs of our clients, including more quantitative investigations. Although risk can never be eliminated, more detailed and extensive investigations yield more information, which may help you understand and better manage your risks. Since such detailed services involve greater expense, we ask our clients to participate in identifying the level of service that will provide them with an acceptable level of risk. Please contact the signatories of this report if you would like to discuss this issue of risk further.

The scope of work on this project was presented in our proposal 41-YP3-813 dated November 21, 2003, and subsequently approved by Ms. Lynn Sletto of Meibeyer Law Group. Please be aware our scope of work was limited to those items specifically identified in the proposal. Environmental issues not specifically addressed in the proposal or this report were beyond the scope of our work and not included in our evaluations.

Kleinfelder performed this environmental site assessment in general accordance with the guidelines set forth in the ASTM Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (Designation E-1527-00). No warranty, either expressed or implied is made.

Land use, site conditions (both on-site and off-site) and other factors will change over time. Since site activities and regulations beyond our control could change at any time after the completion of this report; our observations, findings and opinions can be considered valid only as of the date of the site visit. This report should not be relied upon after 180 days from the date of its issuance (ASTM Standard E-1527-00, Section 4.5).

Any party other than the client who would like to use this report shall notify Kleinfelder of such intended use by executing the "Application for Authorization to Use" contained in Appendix D of this document. Based on the intended use of the report, Kleinfelder may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements by the client or anyone else will release Kleinfelder from any liability resulting from the use of this report by any unauthorized party.

## 9. REFERENCES

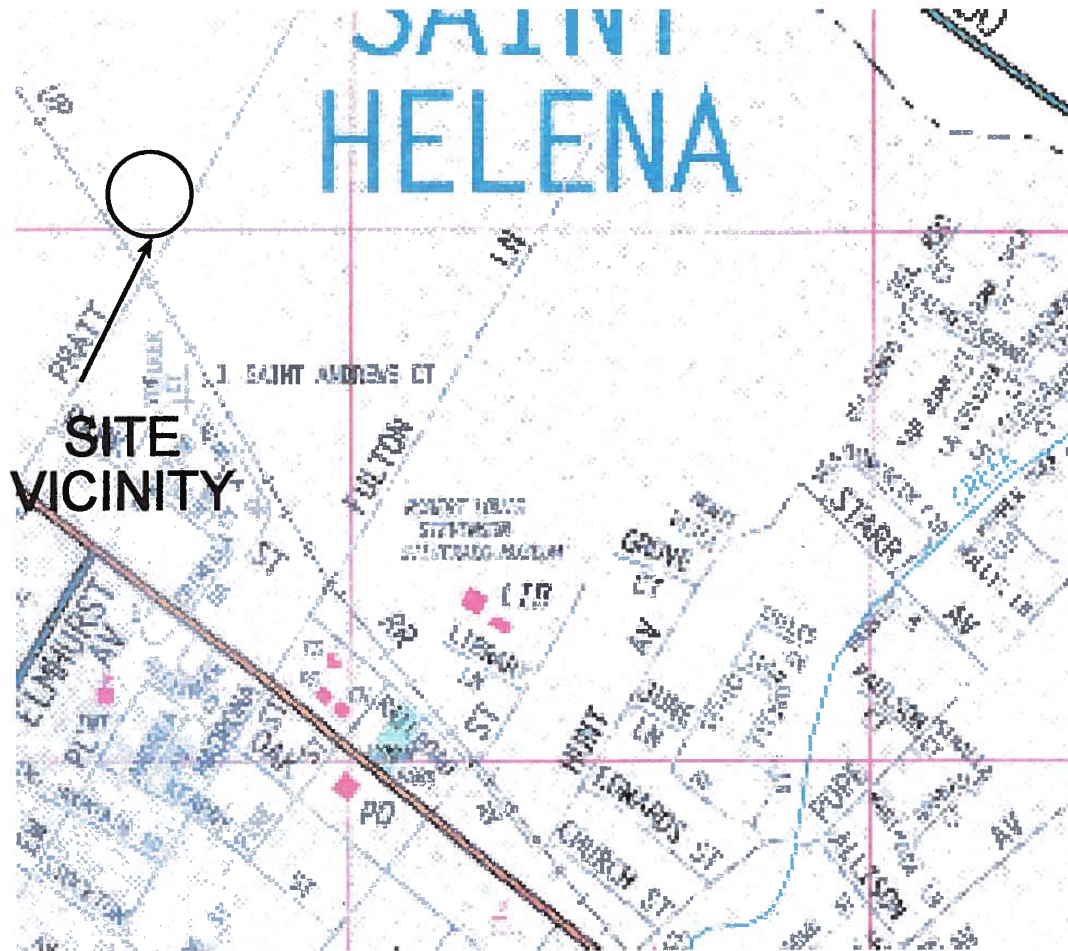
---

1. Environmental Data Resources, 830 Pratt Avenue, St. Helena, CA.
2. Environmental Data Resources, Sanborn Map Report, 830 Pratt Avenue, St. Helena, CA.
3. <ftp://ftp.consrv.ca.gov/pub/oil/maps/Dist6/W6-4/MapW6-4.pdf>
4. Regional Geologic Map Series, Santa Rosa Quadrangle, 1992; (Scale: 1 inch = 12 miles).
5. Topographic Map, St. Helena, 1960, photorevised 1993 (1 inch = 2,000 feet).
6. Soil Survey of Napa County, California, United States Department of Agriculture, Soil Conservation Service publication.



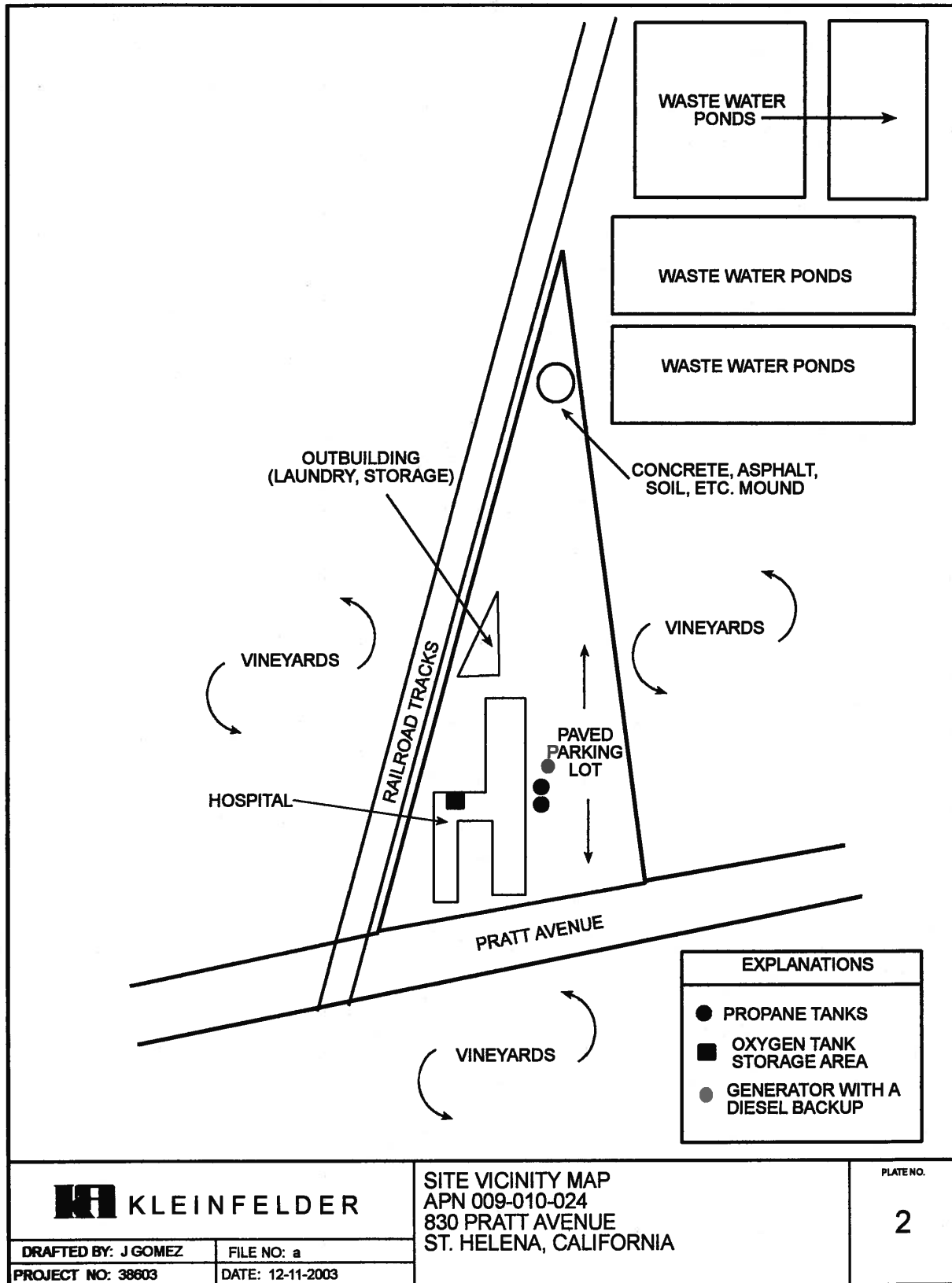
## **APPENDIX A**





|                                                                                                        |                  |                                                                                    |                                                                            |
|--------------------------------------------------------------------------------------------------------|------------------|------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
|  <b>KLEINFELDER</b> |                  | SITE VICINITY MAP<br>APN 009-010-024<br>830 PRATT AVENUE<br>ST. HELENA, CALIFORNIA | PLATE NO.<br><br><div style="font-size: 24pt; text-align: center;">1</div> |
|                                                                                                        |                  |                                                                                    |                                                                            |
| DRAFTED BY: J GOMEZ                                                                                    | FILE NO: a       |                                                                                    |                                                                            |
| PROJECT NO: 38803                                                                                      | DATE: 12-11-2003 |                                                                                    |                                                                            |











PHOTOGRAPH 1: LOOKING NORTHWEST ACROSS THE CENTRAL PORTION OF THE SITE.



PHOTOGRAPH 2: GENERATOR.



PHOTOGRAPH 3: STORAGE BUILDING.



PHOTOGRAPH 4: PROPANE TANKS.



PHOTOGRAPH 5: LOOKING NORTH ALONG THE WEST BORDER OF THE SITE.



PHOTOGRAPH 6: MAIN CONVALESCENT HOSPITAL.



PHOTOGRAPH 7: LOOKING NORTH ALONG THE EAST BORDER OF THE SITE.



Project No. 38803

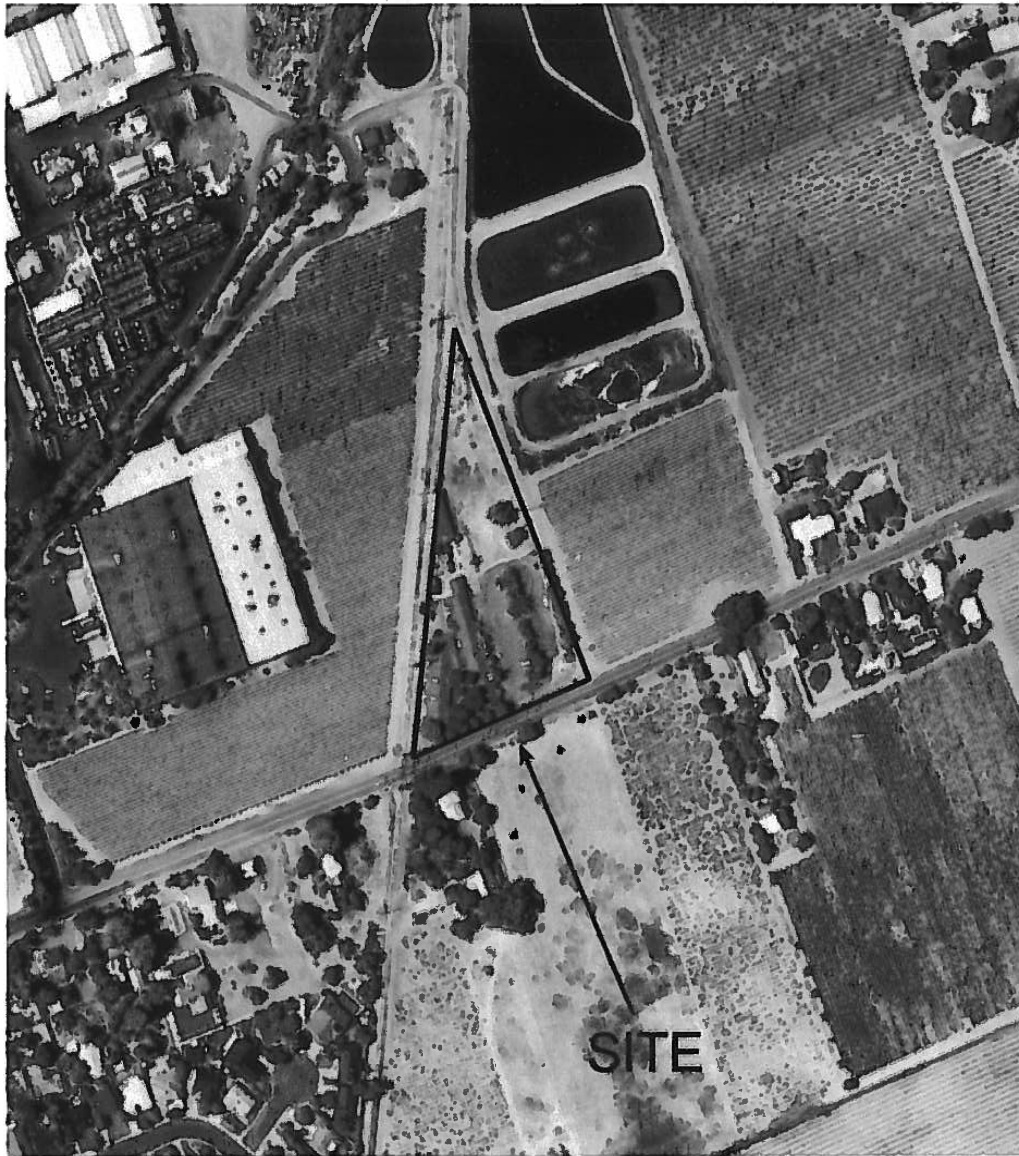
Date: 12/11/2003  
Filename: c.fh10

SITE PHOTOGRAPHS  
APN 009-010-024  
830 PRATT AVENUE  
ST. HELENA, CALIFORNIA

Plate  
**3**







|                                                                                                        |                         |                                                                                                                      |                                  |
|--------------------------------------------------------------------------------------------------------|-------------------------|----------------------------------------------------------------------------------------------------------------------|----------------------------------|
|  <b>KLEINFELDER</b> |                         | <b>AERIAL PHOTOGRAPH, 2000</b><br><b>APN 009-010-024</b><br><b>830 PRATT AVENUE</b><br><b>ST. HELENA, CALIFORNIA</b> | <b>PLATE NO.</b><br><br><b>4</b> |
| <b>DRAFTED BY: J GOMEZ</b>                                                                             | <b>FILE NO: d</b>       |                                                                                                                      |                                  |
| <b>PROJECT NO: 38803</b>                                                                               | <b>DATE: 12-10-2003</b> |                                                                                                                      |                                  |



## **APPENDIX B**





**The EDR-City Directory**  
*Abstract*

830 Pratt Avenue  
830 Pratt Avenue  
St. Helena, CA 94574

December 02, 2003

Inquiry Number: 1089548-7

**The Source  
For Environmental  
Risk Management  
Data**

3530 Post Road  
Southport, Connecticut 06490

**Nationwide Customer Service**

Telephone: 1-800-352-0050  
Fax: 1-800-231-6802

## Environmental Data Resources, Inc. City Directory Abstract

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening tool designed to assist professionals in evaluating potential liability on a target property resulting from past activities. ASTM E 1527-00, Section 7.3 on Historical Use Information, identifies the prior use requirements for a Phase I environmental site assessment. The ASTM standard requires a review of *reasonably ascertainable standard historical sources*. *Reasonably ascertainable means information that is publicly available, obtainable from a source with reasonable time and cost constraints, and practically reviewable.*

To meet the prior use requirements of ASTM E 1527-00, Section 7.3.4, the following *standard historical sources* may be used: aerial photographs, fire insurance maps, property tax files, land title records (although these cannot be the sole historical source consulted), topographic maps, city directories, building department records, or zoning/land use records. ASTM E 1527-00 requires *"All obvious uses of the property shall be identified from the present, back to the property's obvious first developed use, or back to 1940, whichever is earlier. This task requires reviewing only as many of the standard historical sources as are necessary, and that are reasonably ascertainable and likely to be useful."* (ASTM E 1527-00, Section 7.3.4, page 12.)

EDR's City Directory Abstract includes a search and abstract of available city directory data.

### City Directories

City directories have been published for cities and towns across the U.S. since the 1700s. Originally a list of residents, the city directory developed into a sophisticated tool for locating individuals and businesses in a particular urban or suburban area. Twentieth century directories are generally divided into three sections: a business index, a list of resident names and addresses, and a street index. With each address, the directory lists the name of the resident or, if a business is operated from this address, the name and type of business (if unclear from the name). While city directory coverage is comprehensive for major cities, it may be spotty for rural areas and small towns. ASTM E 1527-00 specifies that a *"review of city directories (standard historical sources) at less than approximately five year intervals is not required by this practice."* (ASTM E 1527-00, Section 7.3.4, page 12.)

### NAICS (North American Industry Classification System) Codes

NAICS is a unique, all-new system for classifying business establishments. Adopted in 1997 to replace the prior Standard Industry Classification (SIC) system, it is the system used by the statistical agencies of the United States. It is the first economic classification system to be constructed based on a single economic concept. To learn more about the background, the development and difference between NAICS and SIC, visit the following Census website: <http://www.census.gov/epcd/www/naicsdev.htm>.

Please call EDR Nationwide Customer Service at  
1-800-352-0050 (8am-8pm EST)

with questions or comments about your report.

*Thank you for your business!*

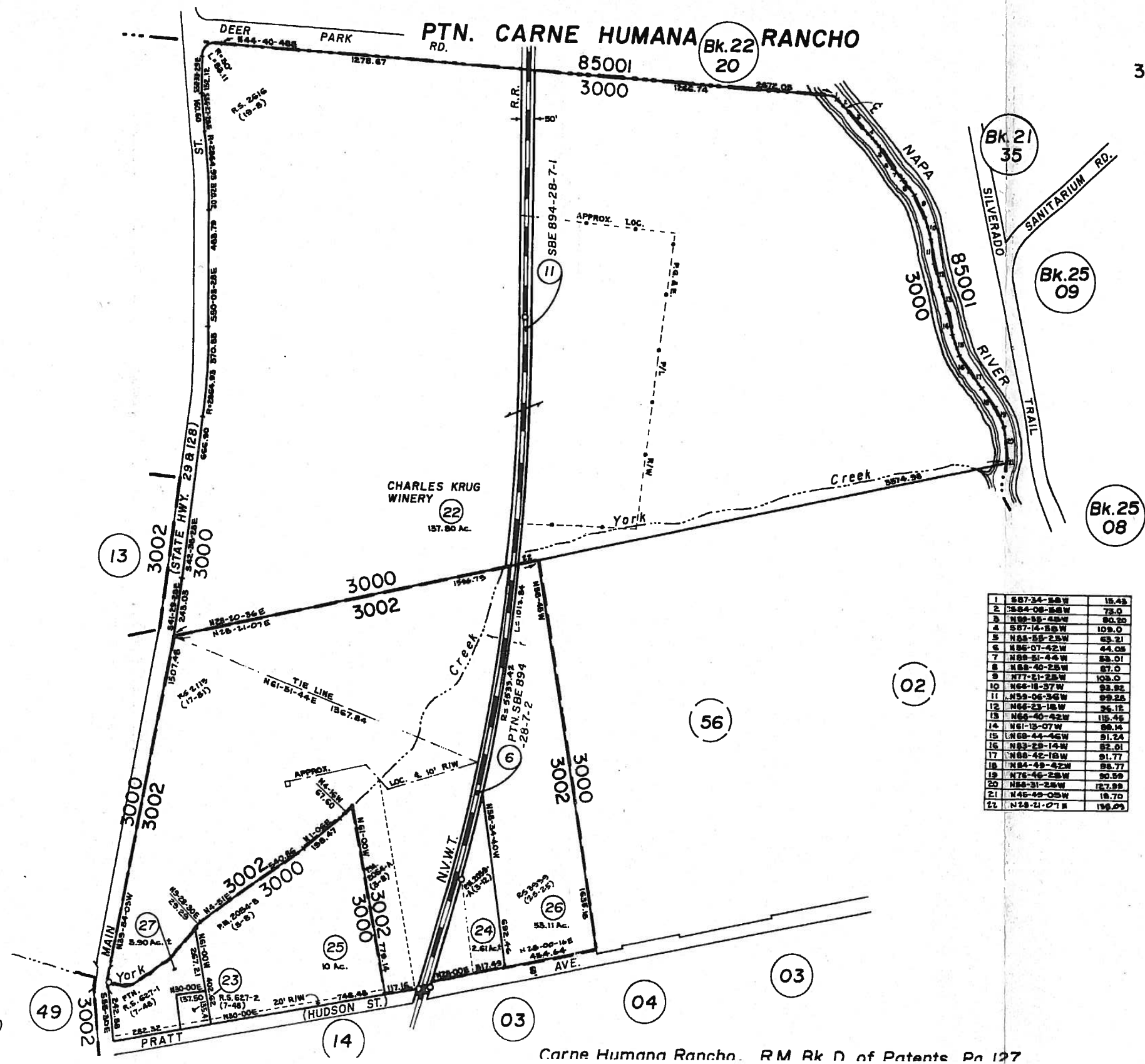
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Assessor of Napa County  
**REVISIONS 1961**  
 (Retraced 1979)  
 10-30-89



Tax Area Code 9-01  
3002,3000

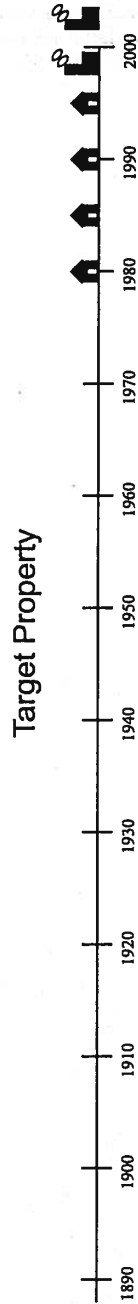
9-01







# Prior Use Report® Timeline



## Legend:

= Historical Topographic Map (HT)

= National Wetland Inventory Map (WT) \*

Superscript number corresponds to graph ID in text

\*Displayed on timeline when aerial photos, flood prone, FEMA, wetland maps, or Aerial Research Summary are purchased.

= Flood Prone/FEMA Maps (FP/FR) \*

= Aerial Photos Included (P) \*

= Aerial Photos Available \*

= Residential (R)

= Commercial or Industrial (C)

**Target Property:** 830 Pratt Avenue  
**Address:** 830 Pratt Avenue  
**City/State/Zip:** St. Helena, CA 94574

**Customer:** Kleinfelder, Inc.  
**Contact:** Jennifer Gomez  
**Inquiry #:** 1089548-7  
**Date:** 12/2/2003

page 1

#### 4. SUMMARY

- *City Directories:*

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1961 through 2003. (These years are not necessarily inclusive.) A summary of the information obtained is provided in the text of this report.

**Date EDR Searched Historical Sources:**  
City Directories Dec 02, 2003

**Target Property:**  
830 Pratt Avenue  
St. Helena, CA 94574

| <u>PUR ID</u><br><u>Year</u> | <u>Uses</u>                           | <u>NAICS</u> | <u>Source</u>                |
|------------------------------|---------------------------------------|--------------|------------------------------|
| -- 1961                      | Street not listed in research source. | N/A          | Polk's City Directory        |
| -- 1965                      | Street not listed in research source. | N/A          | Polk's City Directory        |
| -- 1970                      | Address not Listed in Research Source | N/A          | Polk's City Directory        |
| -- 1975                      | Address not Listed in Research Source | N/A          | Polk's City Directory        |
| -- 1980                      | Residence                             |              | Haines Criss-Cross Directory |
| -- 1985                      | Residence                             |              | Haines Criss-Cross Directory |
| -- 1990                      | Residence                             |              | Haines Criss-Cross Directory |
| -- 1995                      | Residence                             |              | Haines Criss-Cross Directory |
| -- 1999                      | Marilinda Convalescent Hospital       |              | Haines Criss-Cross Directory |
| -- 2003                      | Marilinda Convalescent Hospital       |              | Haines Criss-Cross Directory |

#### Adjoining Properties

**SURROUNDING**  
Pratt Avenue  
St Helena, CA 94574

#### Surrounding Area Property Log of Address Changes 2003 Pratt Avenue

| <u>PUR ID</u><br><u>Year</u> | <u>Uses</u>                                                                                                   | <u>NAICS</u> | <u>Source</u>                |
|------------------------------|---------------------------------------------------------------------------------------------------------------|--------------|------------------------------|
| 1961                         | Street not listed in research source.                                                                         | N/A          | Polk's City Directory        |
| 1965                         | Address not Listed in Research Source                                                                         | N/A          | Polk's City Directory        |
| 1970                         | Address not Listed in Research Source                                                                         | N/A          | Polk's City Directory        |
| 1975                         | <b>**Pratt Avenue Addresses**</b><br>Residence (715)<br>Residence (855)<br>Residence (915)<br>Residence (944) |              | Polk's City Directory        |
| 1980                         | <b>**Pratt Avenue Addresses**</b><br>Residence (715)<br>Residence (855)                                       |              | Haines Criss-Cross Directory |

1089548-7  
3

| <i><u>PUR ID</u></i> | <i><u>Uses</u></i>                       | <i><u>NAICS</u></i> | <i><u>Source</u></i>         |
|----------------------|------------------------------------------|---------------------|------------------------------|
| 1980 (continued)     | Residence (915)                          |                     |                              |
|                      | Residence (944)                          |                     |                              |
| 1985                 | <b><u>**Pratt Avenue Addresses**</u></b> |                     | Haines Criss-Cross Directory |
|                      | Residence (715)                          |                     |                              |
|                      | Residence (855)                          |                     |                              |
|                      | Residence (915)                          |                     |                              |
|                      | Residence (944)                          |                     |                              |
| 1990                 | <b><u>**Pratt Avenue Addresses**</u></b> |                     | Haines Criss-Cross Directory |
|                      | Residence (715)                          |                     |                              |
|                      | Residence (855)                          |                     |                              |
|                      | Residence (915)                          |                     |                              |
|                      | Residence (944)                          |                     |                              |
| 1995                 | <b><u>**Pratt Avenue Addresses**</u></b> |                     | Haines Criss-Cross Directory |
|                      | Residence (715)                          |                     |                              |
|                      | Residence (855)                          |                     |                              |
|                      | Residence (915)                          |                     |                              |
|                      | Residence (944)                          |                     |                              |
| 1999                 | <b><u>**Pratt Avenue Addresses**</u></b> |                     | Haines Criss-Cross Directory |
|                      | Residence (715)                          |                     |                              |
|                      | Residence (855)                          |                     |                              |
|                      | Residence (915)                          |                     |                              |
|                      | Residence (944)                          |                     |                              |
| 2003                 | <b><u>**Pratt Avenue Addresses**</u></b> |                     | Haines Criss-Cross Directory |
|                      | Residence (715)                          |                     |                              |
|                      | Residence (855)                          |                     |                              |
|                      | Residence (915)                          |                     |                              |
|                      | No Return (944)                          |                     |                              |



**The EDR-Aerial Photography  
Print Service**

**830 Pratt Avenue  
830 Pratt Avenue  
St. Helena, CA 94574**

**December 3, 2003**

**Inquiry Number: 1089548-9**

**The Source  
For Environmental  
Risk Management  
Data**

**3530 Post Road  
Southport, Connecticut 06490**

**Nationwide Customer Service**

**Telephone: 1-800-352-0050  
Fax: 1-800-231-6802**

## Environmental Data Resources, Inc. Aerial Photography Print Service

Environmental Data Resources, Inc.'s (EDR) Aerial Photography Print Service is a screening tool designed to assist professionals in evaluating potential liability on a target property resulting from past activities. ASTM E 1527-00, Section 7.3 on Historical Use Information, identifies the prior use requirements for a Phase I environmental site assessment. The ASTM standard requires a review of *reasonably ascertainable standard historical sources*. *Reasonably ascertainable means information that is publicly available, obtainable from a source with reasonable time and cost constraints, and practically reviewable.*

To meet the prior use requirements of ASTM E 1527-00, Section 7.3.2, the following *standard historical sources* may be used: aerial photographs, fire insurance maps, property tax files, land title records (although these cannot be the sole historical source consulted), topographic maps, city directories, building department records, or zoning/land use records. ASTM E 1527-00 requires *"All obvious uses of the property shall be identified from the present, back to the property's obvious first developed use, or back to 1940, whichever is earlier. This task requires reviewing only as many of the standard historical sources as are necessary, and that are reasonably ascertainable and likely to be useful."* (ASTM E 1527-00, Section 7.3.2, page 11.

### Aerial Photographs

Aerial photographs are a valuable historical resource for documenting past land use and can be particularly helpful when other historical sources (such as city directories or fire insurance maps) are not reasonably ascertainable. The EDR Aerial Photograph Print Service includes a search of aerial photograph collections flown by public and private agencies for the state of California. EDR's professional field-based researchers provide digitally reproduced historical aerial photographs at approximately ten year intervals.

Please call EDR Nationwide Customer Service at  
1-800-352-0050 (8a.m-8pm EST)

with questions or comments about your report.

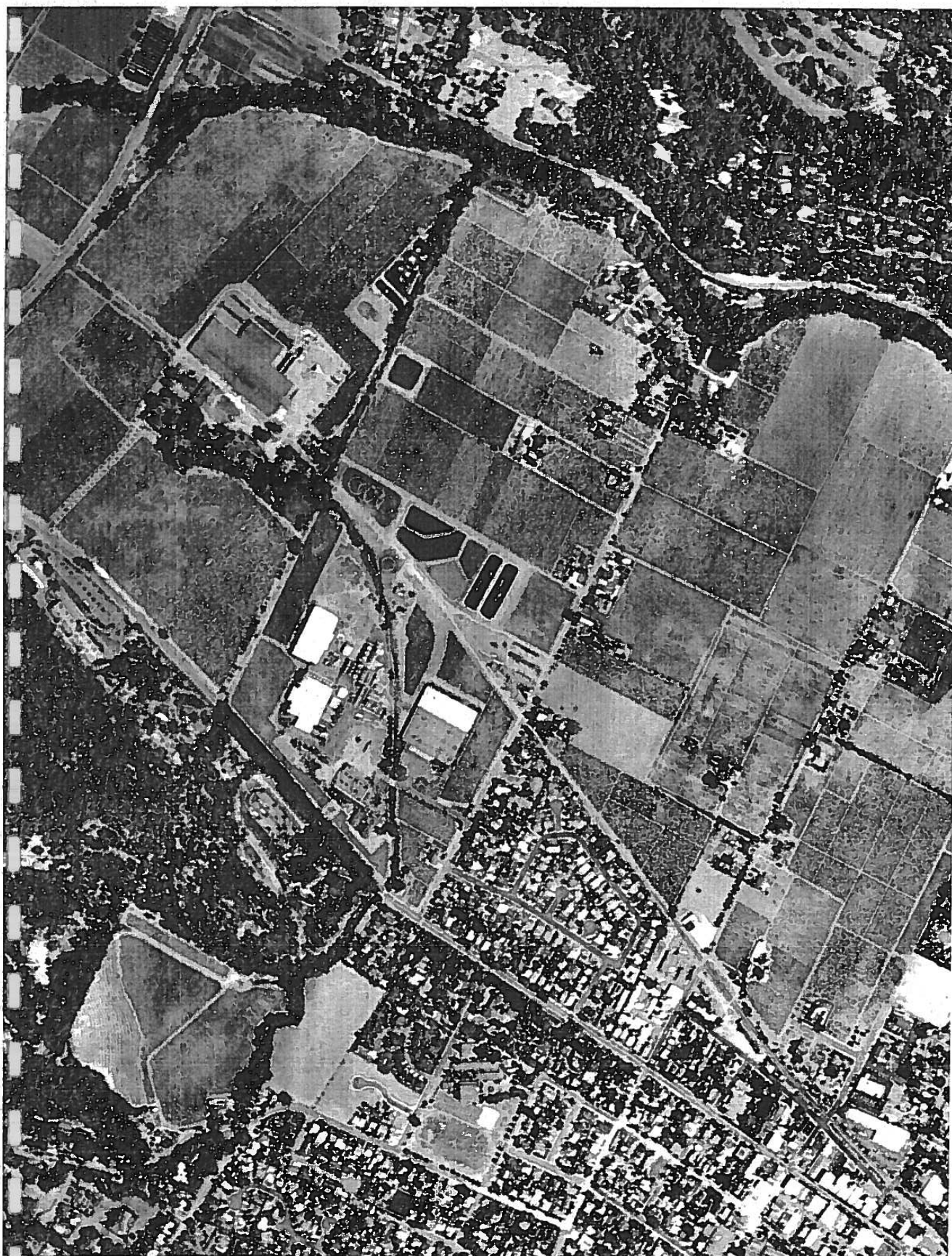
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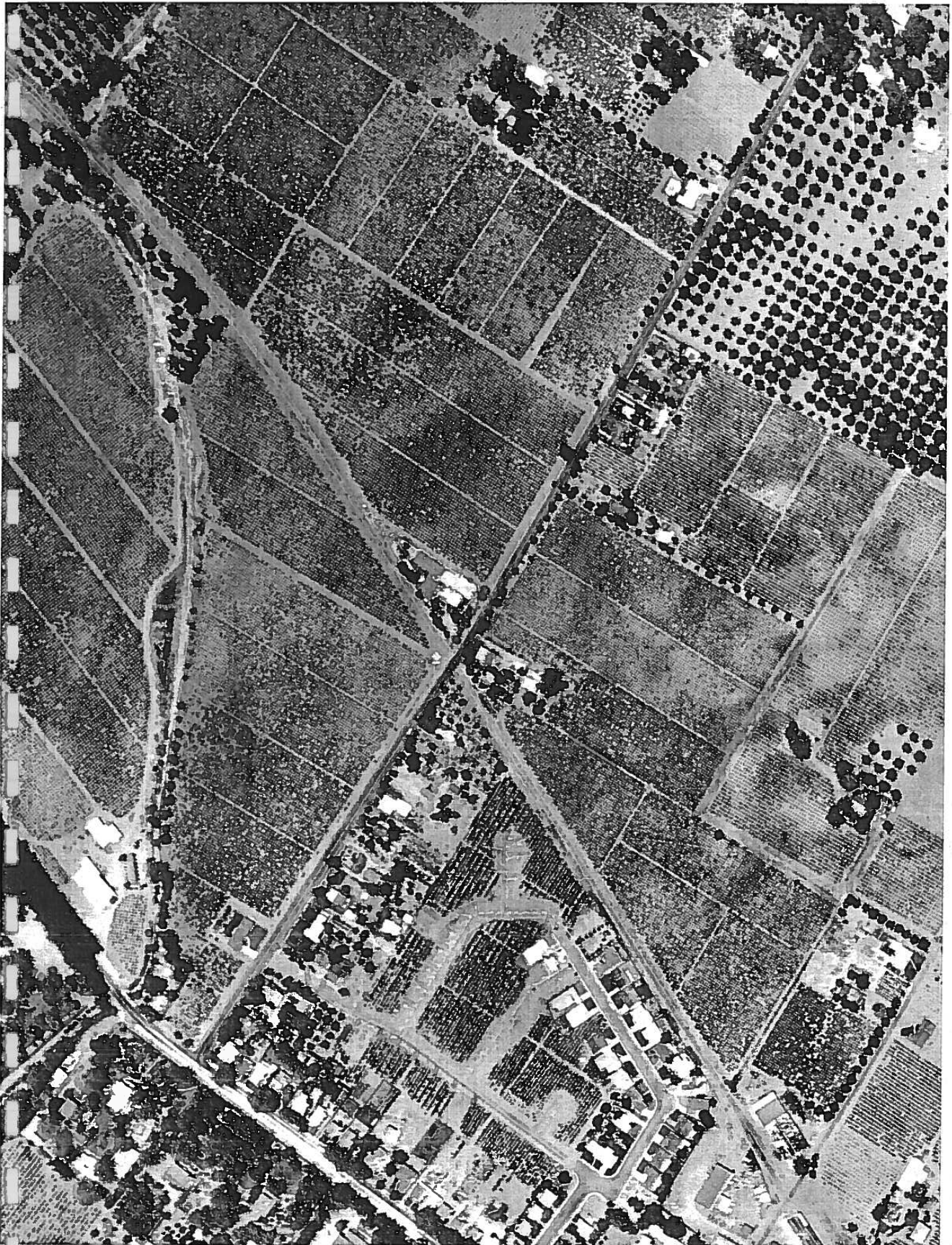
Inquiry : 1089548.9 Year : 1993

Flyer : USGS

Scale : 1"=666'







Inquiry : 1089548.9 Year : 1965

Flyer : Cartwright

Scale : 1"=333'





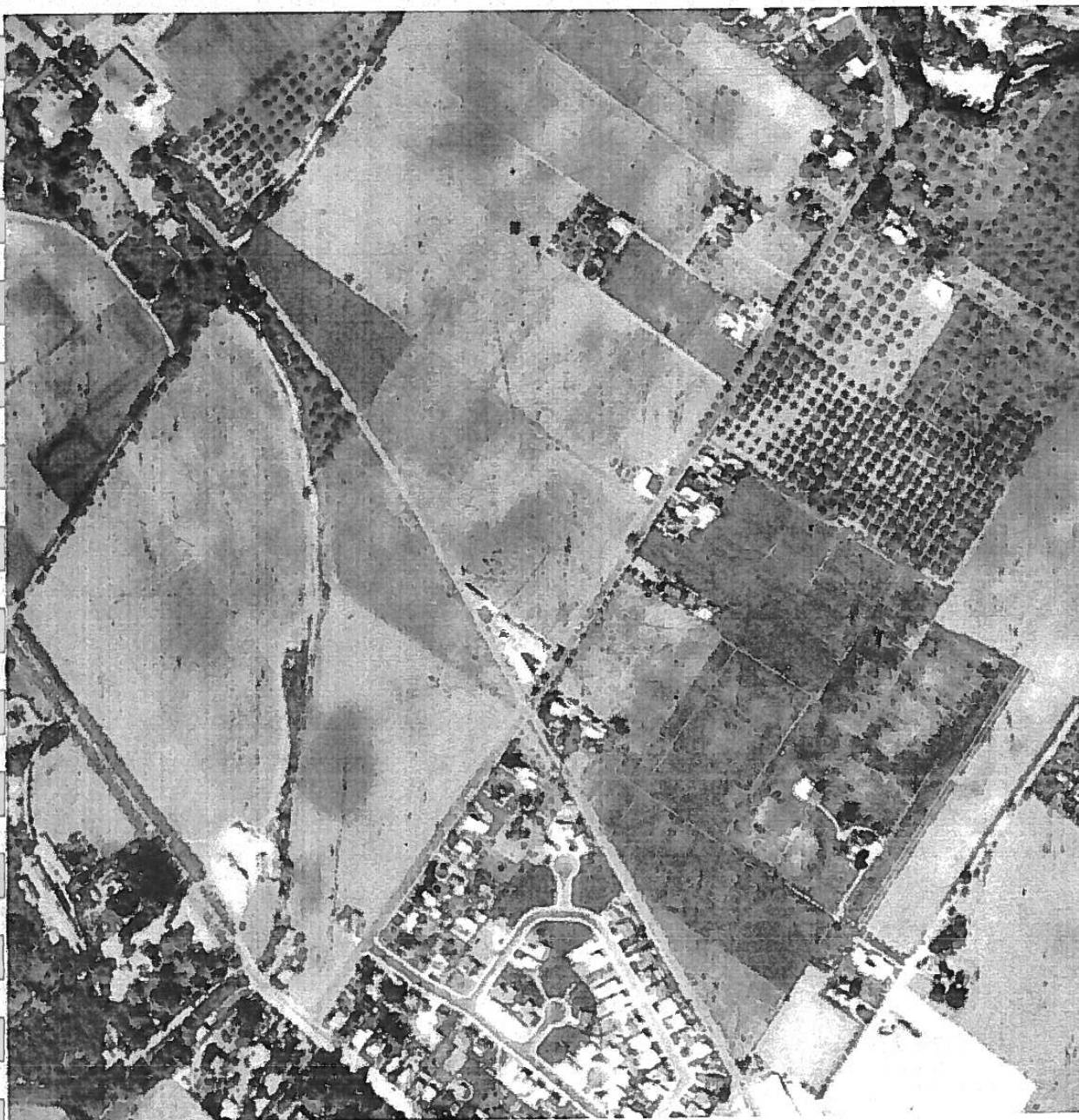


Inquiry : 1089548.9 Year : 1957

Flyer : Cartwright

Scale : 1"=666'





SOURCE: PACIFIC AERIALS, 1968



SOURCE: PACIFIC AERIALS, 1975





SOURCE: PACIFIC AERIALS, 1981

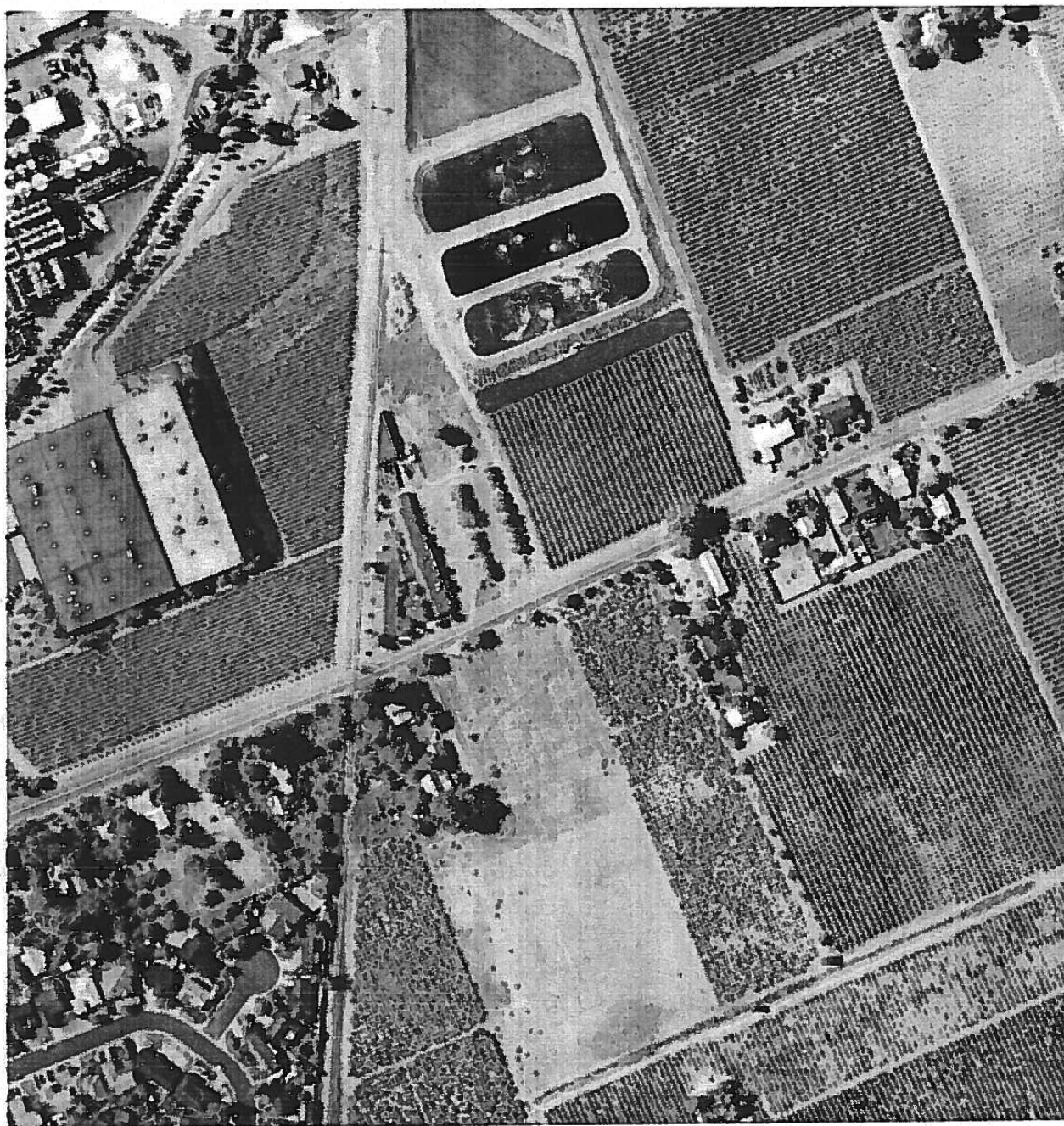


SOURCE: PACIFIC AERIALS, 1988

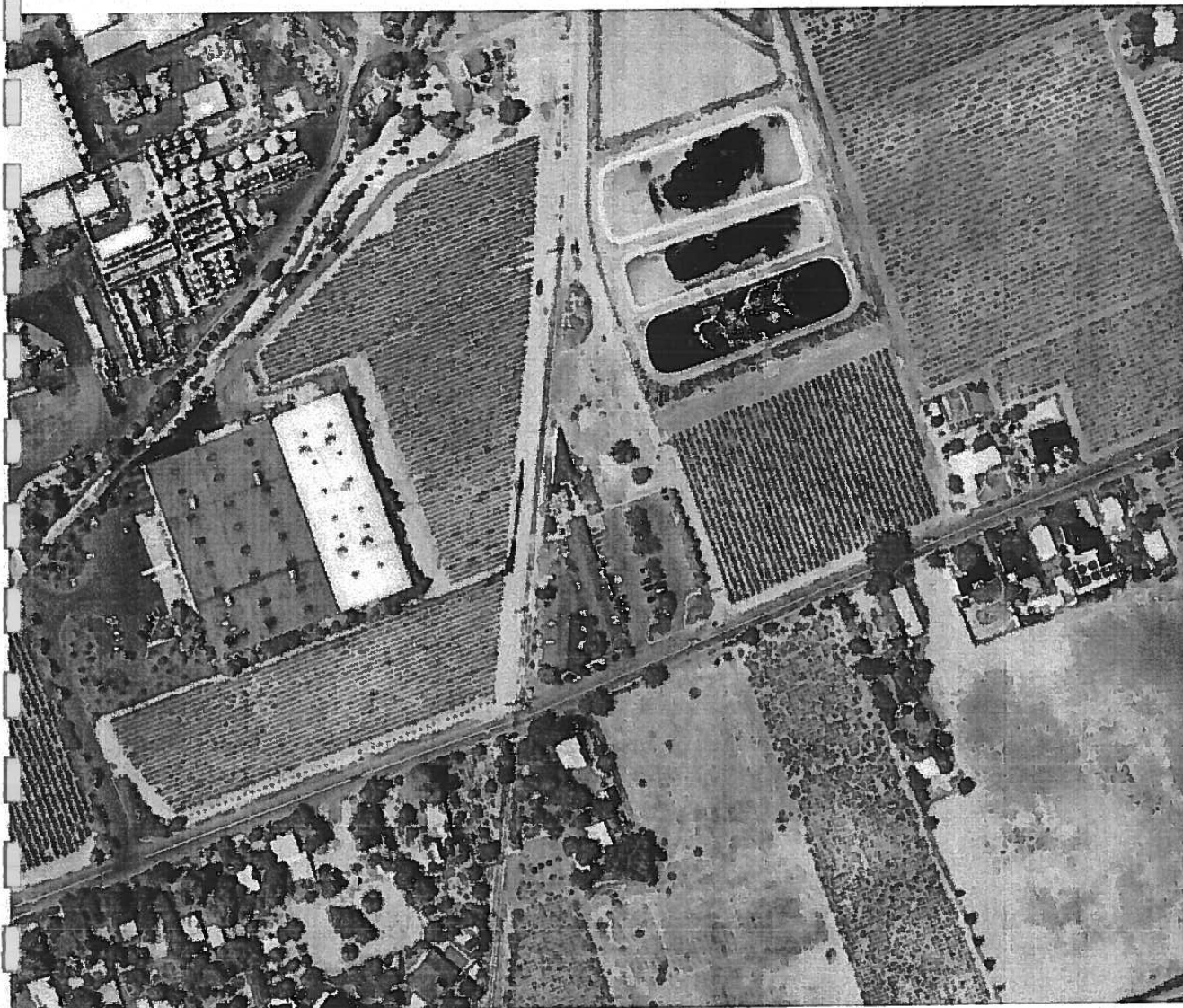


SOURCE: PACIFIC AERIALS, 1993





SOURCE: PACIFIC AERIALS, 1995



SOURCE: PACIFIC AERIALS, 1997





SOURCE: PACIFIC AERIALS, 2000



"Linking Technology with Tradition"

## Sanborn® Map Report

**Ship to:** Jennifer Gomez

Kleinfelder, Inc.

780 Chadbourne Road

Fairfield, CA 94585

**Order Date:** 11/26/2003 **Completion Date:** 11/26/2003 4:28

**Inquiry #:** 1089548.5S

**P.O. #:** NA

**Site Name:** 830 Pratt Avenue

**Address:** 830 Pratt Avenue

**City/State:** St. Helena, CA 94574

**Customer Project:** NA

1273791SHA

707-429-4070

**Cross Streets:**

This document reports that the largest and most complete collection of Sanborn fire insurance maps has been reviewed based on client-supplied information, and fire insurance maps depicting the target property at the specified address were not identified.

**NO COVERAGE**

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**The EDR-Historical  
Topographic Map  
Report**

**830 Pratt Avenue  
830 Pratt Avenue  
St. Helena, CA 94574**

**December 3, 2003**

**Inquiry Number: 1089548-6**

**The Source  
For Environmental  
Risk Management  
Data**

**3530 Post Road  
Southport, Connecticut 06490**

**Nationwide Customer Service**

**Telephone: 1-800-352-0050  
Fax: 1-800-231-6802**

## Environmental Data Resources, Inc. Historical Topographic Map Report

Environmental Data Resources, Inc.'s (EDR) Historical Topographic Map Report is designed to assist professionals in evaluating potential liability on a target property, and its surrounding area, resulting from past activities. ASTM E 1527-00, Section 7.3 on Historical Use Information, identifies the prior use requirements for a Phase I environmental site assessment. The ASTM standard requires a review of *reasonably ascertainable standard historical sources*. *Reasonably ascertainable is defined as information that is publicly available, obtainable from a source with reasonable time and cost constraints, and practically reviewable.*

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EDR's Historical Topographic Map Report includes a search of available public and private color historical topographic map collections.

### Topographic Maps

A topographic map (topo) is a color coded line-and-symbol representation of natural and selected artificial features plotted to a scale. Topos show the shape, elevation, and development of the terrain in precise detail by using contour lines and color coded symbols. Many features are shown by lines that may be straight, curved, solid, dashed, dotted, or in any combination. The colors of the lines usually indicate similar classes of information. For example, topographic contours (brown); lakes, streams, irrigation ditches, etc. (blue); land grids and important roads (red); secondary roads and trails, railroads, boundaries, etc. (black); and features that have been updated using aerial photography, but not field verified, such as disturbed land areas (e.g., gravel pits) and newly developed water bodies (purple).

For more than a century, the USGS has been creating and revising topographic maps for the entire country at a variety of scales. There are about 60,000 U.S. Geological Survey (USGS) produced topo maps covering the United States. Each map covers a specific quadrangle (quad) defined as a four-sided area bounded by latitude and longitude. Historical topographic maps are a valuable historical resource for documenting the prior use of a property and its surrounding area, and due to their frequent availability can be particularly helpful when other standard historical sources (such as city directories, fire insurance maps, or aerial photographs) are not reasonably ascertainable.

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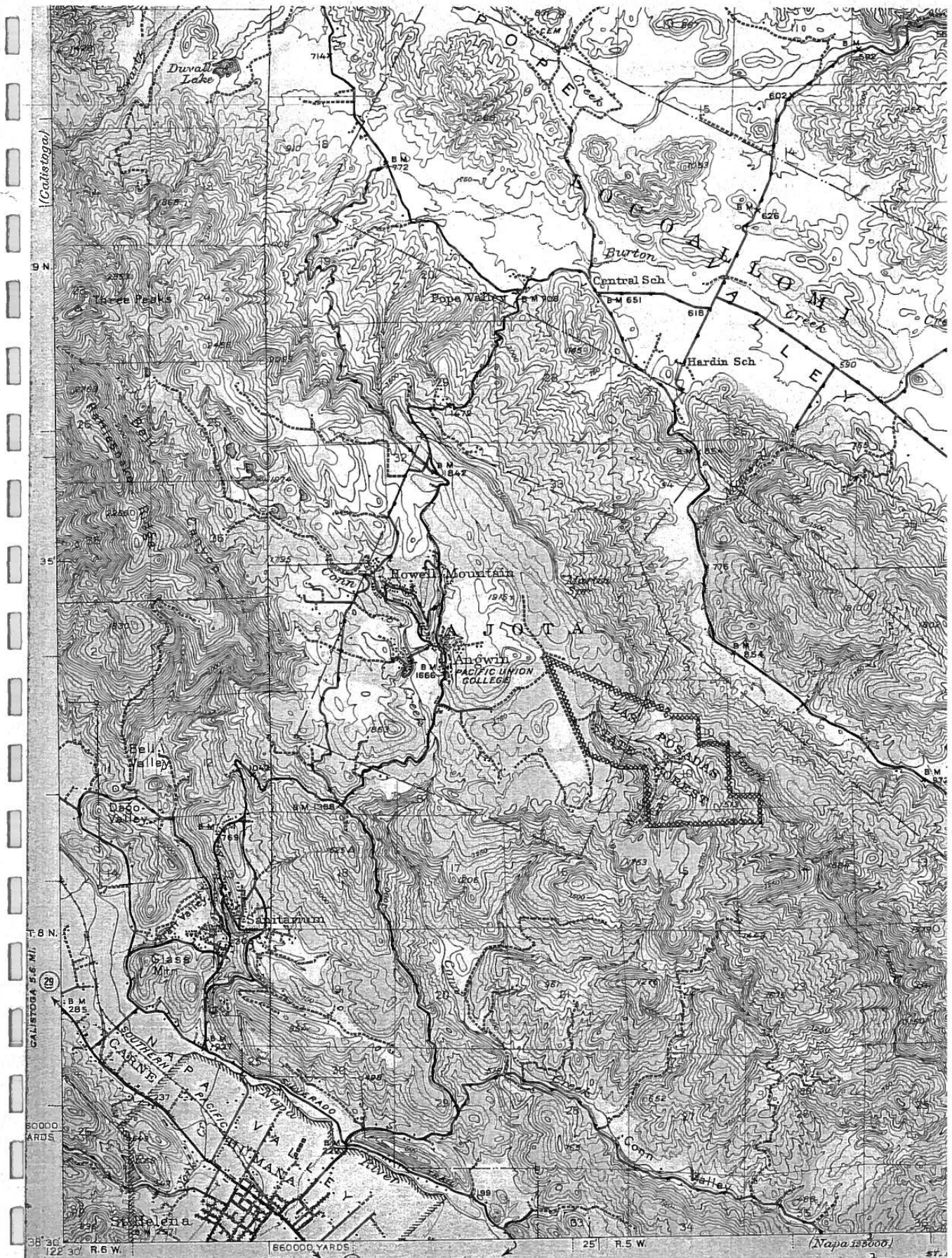
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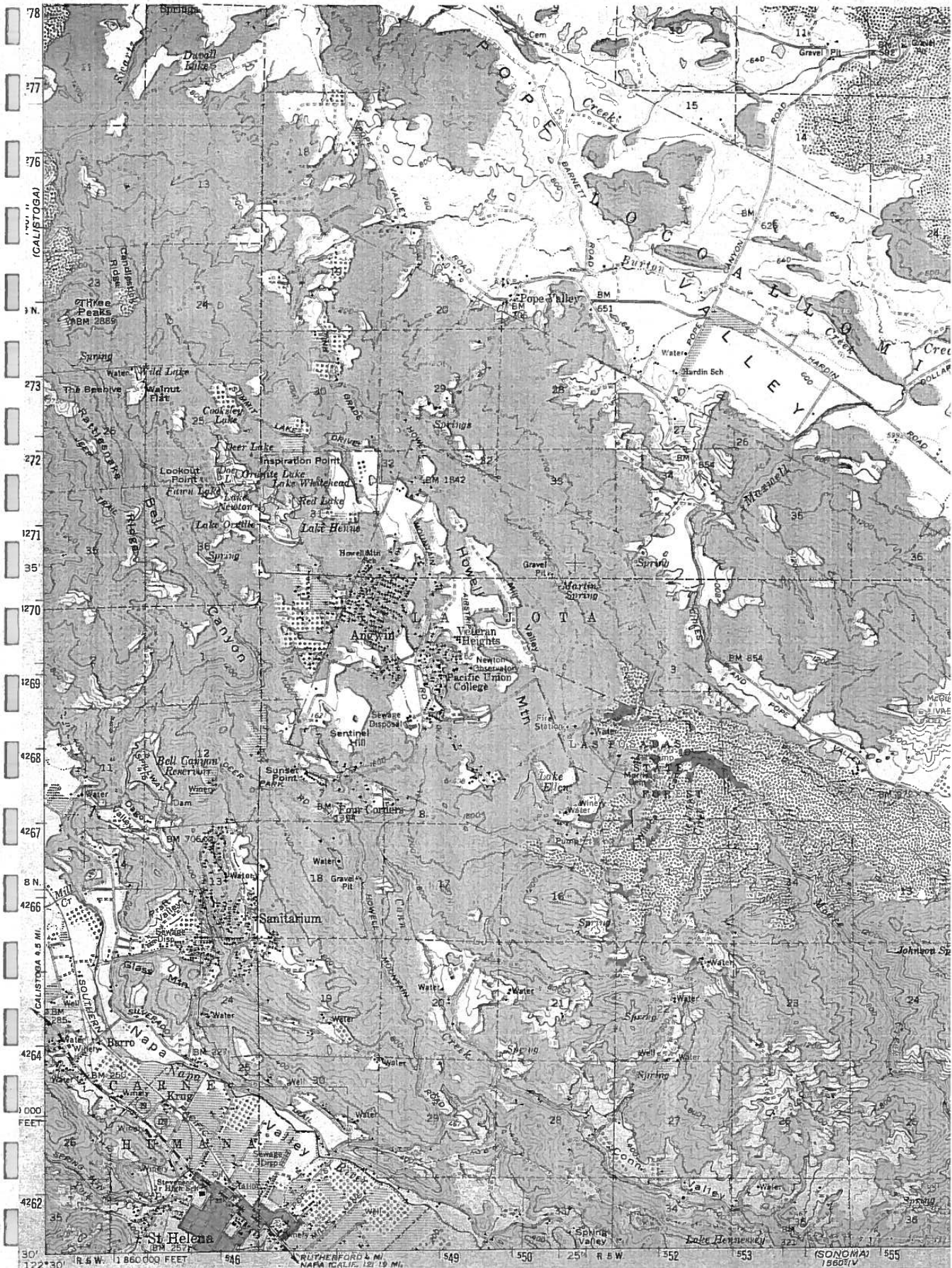






Inquiry Number: 1089548.6  
 TP Quad ☒ Adj Quad ☐ TN  
 Quad ST. HOLINA  
 Minute Series ☐ 7.5 ☒ 15 ☐ 30 ☐ Other \_\_\_\_\_  
 Year 1945  
☐ Photorevised ☐ Inspected from \_\_\_\_\_  
 Scale ☐ 1:24,000 ☒ 1:62,500  
☐ 1:125,000 ☐ Other \_\_\_\_\_





Inquiry Number: 1089548.6  
 TP Quad ☒ Adj Quad ☐ ↑N  
 Quad S. Helena  
 Minute Series ☐ 7.5 ☒ 15 ☐ 30 ☐ Other \_\_\_\_\_  
 Year 1960  
☐ Photorevised ☐ Inspected from \_\_\_\_\_  
 Scale ☐ 1:24,000 ☒ 1:62,500  
☐ 1:125,000 ☐ Other \_\_\_\_\_

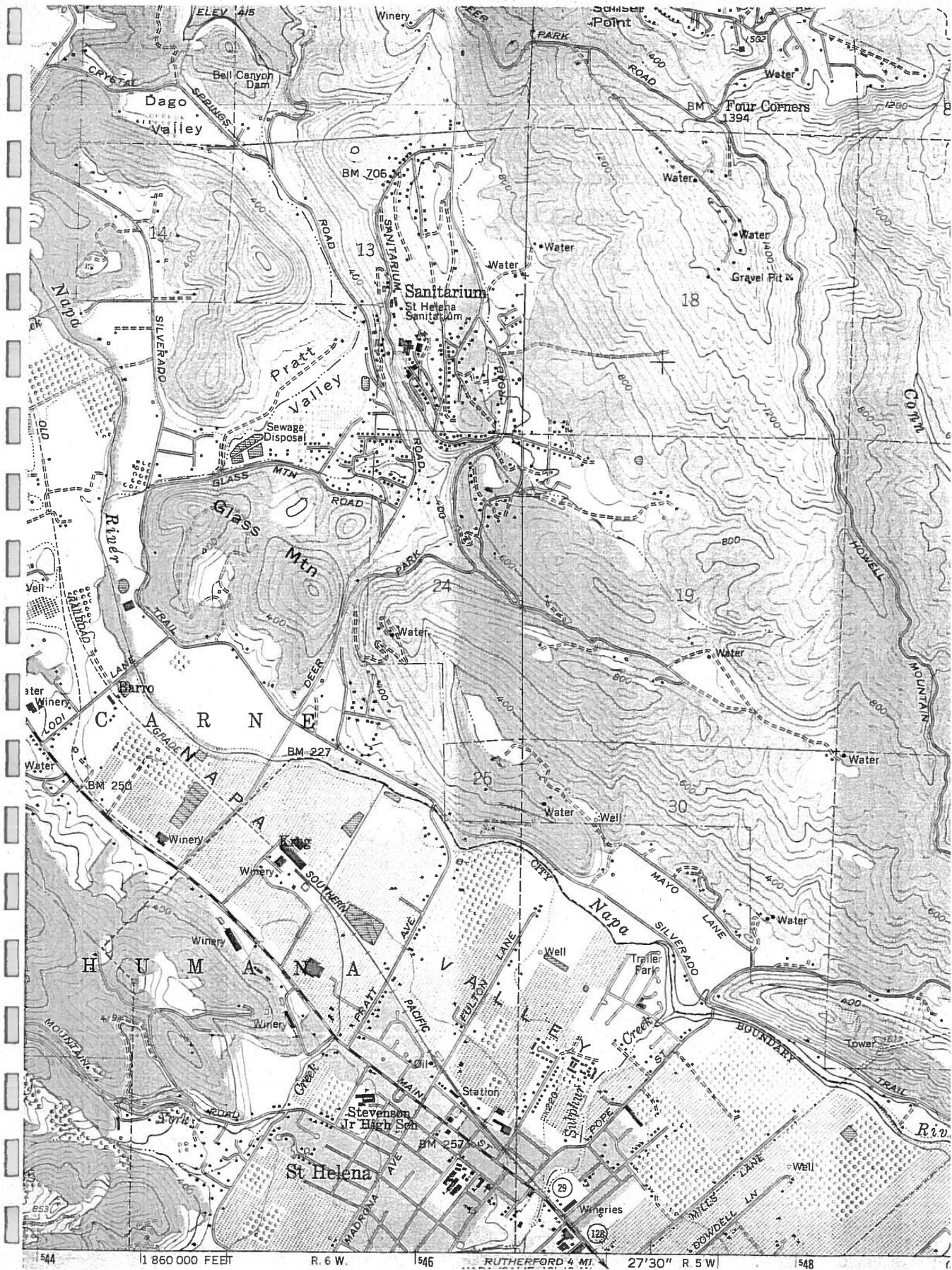






Inquiry Number: 1069548.6 ↑N  
 TP Quad ☒ Adj Quad ☐  
 Quad S. Helena  
 Minute Series ☒ 7.5 ☐ 15 ☐ 30 ☐ Other \_\_\_\_\_  
 Year 1960  
☐ Photorevised ☐ Inspected from \_\_\_\_\_  
 Scale ☒ 1:24,000 ☐ 1:62,500  
☐ 1:125,000 ☐ Other \_\_\_\_\_

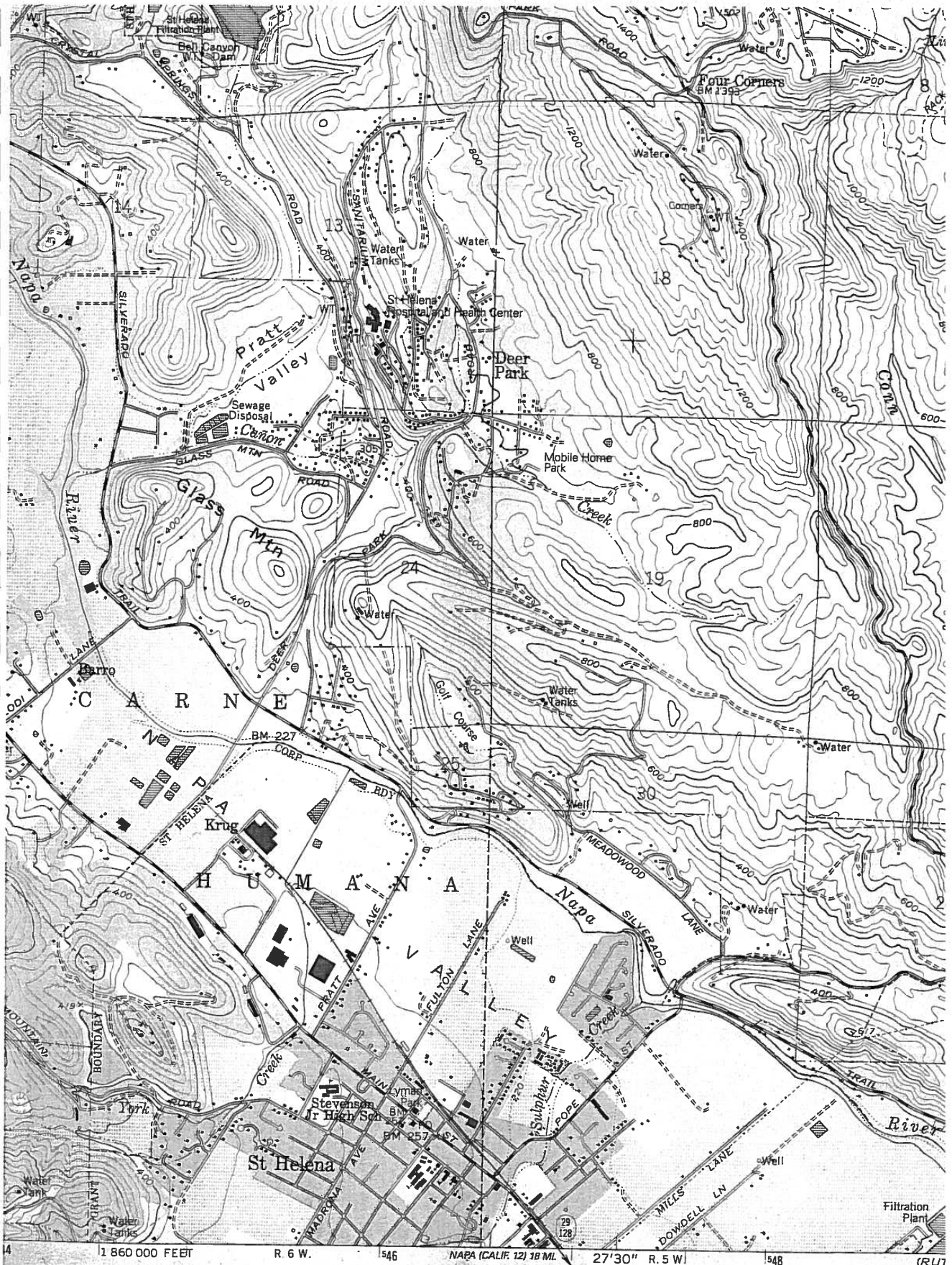




Inquiry Number: 108954B.6 ↑N  
 TP Quad ~~1~~ Adj Quad ☐  
 Quad ST. HELENA  
 Minute Series ~~7.5~~ ☐ 15 ☐ 30 ☐ Other \_\_\_\_\_  
 Year 1980  
☒ Photorevised ☐ Inspected from 1960  
 Scale ☒ 1:24,000 ☐ 1:62,500  
☐ 1:125,000 ☐ Other \_\_\_\_\_







the United States Geological Survey

Inquiry Number: 1089548.10 ↑N  
 TP Quad ☒ Adj Quad ☐  
 Quad St. Helena  
 Minute Series ☒ 7.5 ☐ 15 ☐ 30 ☐ Other \_\_\_\_\_  
 Year 1993  
☒ Photorevised ☐ Inspected from 1960  
 Scale ☒ 1:24,000 ☐ 1:62,500  
☐ 1:125,000 ☐ Other \_\_\_\_\_



## **APPENDIX C**





**The EDR Radius Map  
with GeoCheck®**

**830 Pratt Avenue  
830 Pratt Avenue  
St. Helena, CA 94574**

**Inquiry Number: 1089548.4s**

**November 26, 2003**

***The Source  
For Environmental  
Risk Management  
Data***

**3530 Post Road  
Southport, Connecticut 06890**

**Nationwide Customer Service**

**Telephone: 1-800-352-0050  
Fax: 1-800-231-6802  
Internet: [www.edrnet.com](http://www.edrnet.com)**

FORM-004

## EXECUTIVE SUMMARY

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property. Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

### FEDERAL ASTM STANDARD

**ERNS:** The Emergency Response Notification System records and stores information on reported releases of oil and hazardous substances. The source of this database is the U.S. EPA.

A review of the ERNS list, as provided by EDR, and dated 12/31/2002 has revealed that there are 7 ERNS sites within approximately 0.25 miles of the target property.

| <u>Equal/Higher Elevation</u> | <u>Address</u>    | <u>Dist / Dir</u> | <u>Map ID</u> | <u>Page</u> |
|-------------------------------|-------------------|-------------------|---------------|-------------|
| 1000 PRATT AVE                | 1000 PRATT AVE    | 1/8 - 1/4 SSW     | A3            | 8           |
| 1000 PRATT AVENUE             | 1000 PRATT AVENUE | 1/8 - 1/4 SSW     | A4            | 8           |
| 1000 PRATT AVE                | 1000 PRATT AVE    | 1/8 - 1/4 SSW     | A5            | 8           |
| 1000 PRATT AVENUE             | 1000 PRATT AVENUE | 1/8 - 1/4 SSW     | A7            | 10          |
| 1000 PRATT AVE                | 1000 PRATT AVE    | 1/8 - 1/4 SSW     | A10           | 13          |
| 1000 PRATT AVE                | 1000 PRATT AVE    | 1/8 - 1/4 SSW     | A11           | 13          |
| 1000 PRATT AVE                | 1000 PRATT AVE    | 1/8 - 1/4 SSW     | A12           | 13          |

### STATE ASTM STANDARD

**CHMIRS:** The California Hazardous Material Incident Report System contains information on reported hazardous material incidents, i.e., accidental releases or spills. The source is the California Office of Emergency Services.

A review of the CHMIRS list, as provided by EDR, and dated 12/31/2002 has revealed that there are 5 CHMIRS sites within approximately 1.25 miles of the target property.

| <u>Equal/Higher Elevation</u> | <u>Address</u>     | <u>Dist / Dir</u> | <u>Map ID</u> | <u>Page</u> |
|-------------------------------|--------------------|-------------------|---------------|-------------|
| Not reported                  | 1000 PRATT AVE.    | 1/8 - 1/4 SSW     | A2            | 6           |
| Not reported                  | 1000 PRATT AV      | 1/8 - 1/4 SSW     | A8            | 10          |
| Not reported                  | 1000 PRATT AVE     | 1/8 - 1/4 SSW     | A9            | 11          |
| Not reported                  | 1000 PRATTE AVENUE | 1/8 - 1/4 SW      | 13            | 13          |
| Not reported                  | 1354 MAIN ST.      | 1/2 - 1 SSE       | D29           | 30          |

**CORTESE:** This database identifies public drinking water wells with detectable levels of contamination, hazardous substance sites selected for remedial action, sites with known toxic material identified through the abandoned site assessment program, sites with USTs having a reportable release and all solid waste disposal facilities from which there is known migration. The source is the California

## EXECUTIVE SUMMARY

|                                |                                          |
|--------------------------------|------------------------------------------|
| <b>Cal-Sites</b> .....         | Calsites Database                        |
| <b>Notify 65</b> .....         | Proposition 65 Records                   |
| <b>Toxic Pits</b> .....        | Toxic Pits Cleanup Act Sites             |
| <b>SWF/LF</b> .....            | Solid Waste Information System           |
| <b>WMUDS/SWAT</b> .....        | Waste Management Unit Database           |
| <b>CA BOND EXP. PLAN</b> ..... | Bond Expenditure Plan                    |
| <b>VCP</b> .....               | Voluntary Cleanup Program Properties     |
| <b>INDIAN UST</b> .....        | Underground Storage Tanks on Indian Land |

### FEDERAL ASTM SUPPLEMENTAL

|                             |                                                                                                                             |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| <b>CONSENT</b> .....        | Superfund (CERCLA) Consent Decrees                                                                                          |
| <b>ROD</b> .....            | Records Of Decision                                                                                                         |
| <b>Defisted NPL</b> .....   | National Priority List Deletions                                                                                            |
| <b>FINDS</b> .....          | Facility Index System/Facility Identification Initiative Program Summary Report                                             |
| <b>HMIRS</b> .....          | Hazardous Materials Information Reporting System                                                                            |
| <b>MLTS</b> .....           | Material Licensing Tracking System                                                                                          |
| <b>MINES</b> .....          | Mines Master Index File                                                                                                     |
| <b>NPL Liens</b> .....      | Federal Superfund Liens                                                                                                     |
| <b>PADS</b> .....           | PCB Activity Database System                                                                                                |
| <b>DOD</b> .....            | Department of Defense Sites                                                                                                 |
| <b>US BROWNFIELDS</b> ..... | A Listing of Brownfields Sites                                                                                              |
| <b>RAATS</b> .....          | RCRA Administrative Action Tracking System                                                                                  |
| <b>TRIS</b> .....           | Toxic Chemical Release Inventory System                                                                                     |
| <b>TSCA</b> .....           | Toxic Substances Control Act                                                                                                |
| <b>SSTS</b> .....           | Section 7 Tracking Systems                                                                                                  |
| <b>FTTS</b> .....           | FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act) |

### STATE OR LOCAL ASTM SUPPLEMENTAL

|                       |                                                              |
|-----------------------|--------------------------------------------------------------|
| <b>AST</b> .....      | Aboveground Petroleum Storage Tank Facilities                |
| <b>CLEANERS</b> ..... | Cleaner Facilities                                           |
| <b>CA WDS</b> .....   | Waste Discharge System                                       |
| <b>DEED</b> .....     | List of Deed Restrictions                                    |
| <b>NFA</b> .....      | No Further Action Determination                              |
| <b>EMI</b> .....      | Emissions Inventory Data                                     |
| <b>REF</b> .....      | Unconfirmed Properties Referred to Another Agency            |
| <b>SCH</b> .....      | School Property Evaluation Program                           |
| <b>NFE</b> .....      | Properties Needing Further Evaluation                        |
| <b>CA SLIC</b> .....  | Spills, Leaks, Investigation & Cleanup Cost Recovery Listing |

### BROWNFIELDS DATABASES

|                             |                                      |
|-----------------------------|--------------------------------------|
| <b>US BROWNFIELDS</b> ..... | A Listing of Brownfields Sites       |
| <b>VCP</b> .....            | Voluntary Cleanup Program Properties |

### EDR PROPRIETARY HISTORICAL DATABASES

See the EDR Proprietary Historical Database Section for details

### SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified:



## EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc. (EDR). The report meets the government records search requirements of ASTM Standard Practice for Environmental Site Assessments, E 1527-00. Search distances are per ASTM standard or custom distances requested by the user.

### TARGET PROPERTY INFORMATION

#### ADDRESS

830 PRATT AVENUE  
ST. HELENA, CA 94574

#### COORDINATES

|                                |                             |
|--------------------------------|-----------------------------|
| Latitude (North):              | 38.513400 - 38° 30' 48.2"   |
| Longitude (West):              | 122.475000 - 122° 28' 30.0" |
| Universal Transverse Mercator: | Zone 10                     |
| UTM X (Meters):                | 545771.7                    |
| UTM Y (Meters):                | 4262704.0                   |
| Elevation:                     | 248 ft. above sea level     |

### USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

|                  |                             |
|------------------|-----------------------------|
| Target Property: | 2438122-E4 SAINT HELENA, CA |
| Source:          | USGS 7.5 min quad index     |

### TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

### DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ( "reasonably ascertainable ") government records either on the target property or within the ASTM E 1527-00 search radius around the target property for the following databases:

### FEDERAL ASTM STANDARD

|                           |                                                                                      |
|---------------------------|--------------------------------------------------------------------------------------|
| <b>NPL</b> .....          | National Priority List                                                               |
| <b>Proposed NPL</b> ..... | Proposed National Priority List Sites                                                |
| <b>CERCLIS</b> .....      | Comprehensive Environmental Response, Compensation, and Liability Information System |
| <b>CERC-NFRAP</b> .....   | CERCLIS No Further Remedial Action Planned                                           |
| <b>CORRACTS</b> .....     | Corrective Action Report                                                             |
| <b>RCRIS-TSD</b> .....    | Resource Conservation and Recovery Information System                                |
| <b>RCRIS-LQG</b> .....    | Resource Conservation and Recovery Information System                                |
| <b>RCRIS-SQG</b> .....    | Resource Conservation and Recovery Information System                                |

### STATE ASTM STANDARD

|                  |                       |
|------------------|-----------------------|
| <b>AWP</b> ..... | Annual Workplan Sites |
|------------------|-----------------------|

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## EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

| <u>Site Name</u>                       | <u>Database(s)</u> |
|----------------------------------------|--------------------|
| TRIPOLI MARKET                         | LUST, Cortese      |
| PG&E GAS PLANT ST HELENA               | CERC-NFRAP         |
| ST HELENA CEMETERY ASSOC               | LUST               |
| KUHN PROPERTY                          | UST                |
| PAT GOLDEN                             | UST                |
| JEAN CLAUDE BOISSET LION IMPOR         | HIST UST           |
| RICHARD A. KUHN                        | HIST UST           |
| BERINGER VINEYARDS                     | HIST UST           |
| COLLINS VINEYARD                       | HIST UST           |
| FLORA SPRINGS WINE CO                  | HAZNET             |
| CALTRANS DIST 4                        | HAZNET             |
| HENDRICK SMEDING                       | HAZNET             |
| NAPA COUNTY UPPER VALLEY WASTE MGMT AG | HAZNET             |
| CALTRANS                               | HAZNET             |
| C MONDAVI & SONS                       | HAZNET             |

## EXECUTIVE SUMMARY

| <u>Equal/Higher Elevation</u> | <u>Address</u>          | <u>Dist / Dir</u>    | <u>Map ID</u> | <u>Page</u> |
|-------------------------------|-------------------------|----------------------|---------------|-------------|
| <b>BERINGER VINEYARDS</b>     | <b>2000 MAIN ST</b>     | <b>1/4 - 1/2 SW</b>  | <b>14</b>     | <b>14</b>   |
| <b>ABRUZZINI PROPERTY</b>     | <b>1030 FULTON LANE</b> | <b>1/4 - 1/2 SSE</b> | <b>B18</b>    | <b>18</b>   |
| <b>HELEN PASCHICH ESTATE</b>  | <b>1078 FULTON LANE</b> | <b>1/4 - 1/2 SSE</b> | <b>B19</b>    | <b>18</b>   |
| <b>NICHOLLS, FREEMAN</b>      | <b>1080 FULTON LN</b>   | <b>1/4 - 1/2 SSE</b> | <b>B20</b>    | <b>20</b>   |

**CA FID:** The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, has revealed that there is 1 CA FID UST site within approximately 0.5 miles of the target property.

| <u>Equal/Higher Elevation</u> | <u>Address</u>        | <u>Dist / Dir</u>    | <u>Map ID</u> | <u>Page</u> |
|-------------------------------|-----------------------|----------------------|---------------|-------------|
| <b>RON ABRUZZINI</b>          | <b>1030 FULTON LN</b> | <b>1/4 - 1/2 SSE</b> | <b>B17</b>    | <b>17</b>   |

**HIST UST:** Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there is 1 HIST UST site within approximately 0.25 miles of the target property.

| <u>Equal/Higher Elevation</u> | <u>Address</u>       | <u>Dist / Dir</u>    | <u>Map ID</u> | <u>Page</u> |
|-------------------------------|----------------------|----------------------|---------------|-------------|
| <b>LINO GUIDICI</b>           | <b>999 PRATT AVE</b> | <b>1/8 - 1/4 SSW</b> | <b>A1</b>     | <b>6</b>    |

### STATE OR LOCAL ASTM SUPPLEMENTAL

**HAZNET:** The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000-1,000,000 annually, representing approximately 350,000-500,000 shipments. Data from non-California manifests & continuation sheets are not included at the present time. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, & disposal method. The source is the Department of Toxic Substance Control is the agency

A review of the HAZNET list, as provided by EDR, has revealed that there is 1 HAZNET site within approximately 0.25 miles of the target property.

| <u>Equal/Higher Elevation</u> | <u>Address</u>        | <u>Dist / Dir</u>    | <u>Map ID</u> | <u>Page</u> |
|-------------------------------|-----------------------|----------------------|---------------|-------------|
| <b>BERINGER VINEYARDS</b>     | <b>1000 PRATT AVE</b> | <b>1/8 - 1/4 SSW</b> | <b>A6</b>     | <b>8</b>    |

### EDR PROPRIETARY HISTORICAL DATABASES

See the EDR Proprietary Historical Database Section for details

## EXECUTIVE SUMMARY

### Environmental Protection Agency/Office of Emergency Information.

A review of the Cortese list, as provided by EDR, has revealed that there are 15 Cortese sites within approximately 1.25 miles of the target property.

| <u>Equal/Higher Elevation</u>         | <u>Address</u>                 | <u>Dist / Dir</u>    | <u>Map ID</u> | <u>Page</u> |
|---------------------------------------|--------------------------------|----------------------|---------------|-------------|
| <b>BERINGER VINEYARDS</b>             | <b>2000 MAIN ST</b>            | <b>1/4 - 1/2 SW</b>  | <b>14</b>     | <b>14</b>   |
| <b>ABRUZZINI PROPERTY</b>             | <b>1030 FULTON LN</b>          | <b>1/4 - 1/2 SSE</b> | <b>B15</b>    | <b>16</b>   |
| <b>HELEN PASCHICH ESTATE</b>          | <b>1078 FULTON LANE</b>        | <b>1/4 - 1/2 SSE</b> | <b>B19</b>    | <b>18</b>   |
| <b>ST HELENA POLICE DEPARTMENT</b>    | <b>1480 MAIN ST</b>            | <b>1/2 - 1 SSE</b>   | <b>C21</b>    | <b>20</b>   |
| <b>JAEGER PROPERTY</b>                | <b>1665 SPRING MOUNTAIN RD</b> | <b>1/2 - 1 S</b>     | <b>24</b>     | <b>23</b>   |
| <b>CHEVRON</b>                        | <b>1400 MAIN ST</b>            | <b>1/2 - 1 SSE</b>   | <b>D26</b>    | <b>25</b>   |
| <b>UNION 76</b>                       | <b>1380 MAIN ST</b>            | <b>1/2 - 1 SSE</b>   | <b>D28</b>    | <b>27</b>   |
| <b>ST HELENA CEMETERY ASSOC</b>       | <b>2461 2 SPRING ST</b>        | <b>1 - 2 S</b>       | <b>36</b>     | <b>41</b>   |
| <u>Lower Elevation</u>                | <u>Address</u>                 | <u>Dist / Dir</u>    | <u>Map ID</u> | <u>Page</u> |
| <b>PACIFIC BELL</b>                   | <b>1240 OAK STREET</b>         | <b>1/2 - 1 SSE</b>   | <b>30</b>     | <b>31</b>   |
| <b>BP</b>                             | <b>1108 MAIN ST</b>            | <b>1/2 - 1 SSE</b>   | <b>31</b>     | <b>34</b>   |
| <b>ST HELENA PETROLEUM INC</b>        | <b>929 MAIN ST</b>             | <b>1 - 2 SSE</b>     | <b>E32</b>    | <b>35</b>   |
| <b>ST HELENA PETROLEUM</b>            | <b>905 MAIN ST</b>             | <b>1 - 2 SE</b>      | <b>E33</b>    | <b>37</b>   |
| <b>ST HELENA CITY CORPORATION YAR</b> | <b>1405 CHARTER OAK</b>        | <b>1 - 2 SSE</b>     | <b>34</b>     | <b>38</b>   |
| <b>BELLANI RESIDENCE</b>              | <b>738 MAIN ST</b>             | <b>1 - 2 SE</b>      | <b>35</b>     | <b>40</b>   |
| <b>EPPS CHEVROLET</b>                 | <b>555 MAIN ST</b>             | <b>1 - 2 SE</b>      | <b>37</b>     | <b>42</b>   |

**LUST:** The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.

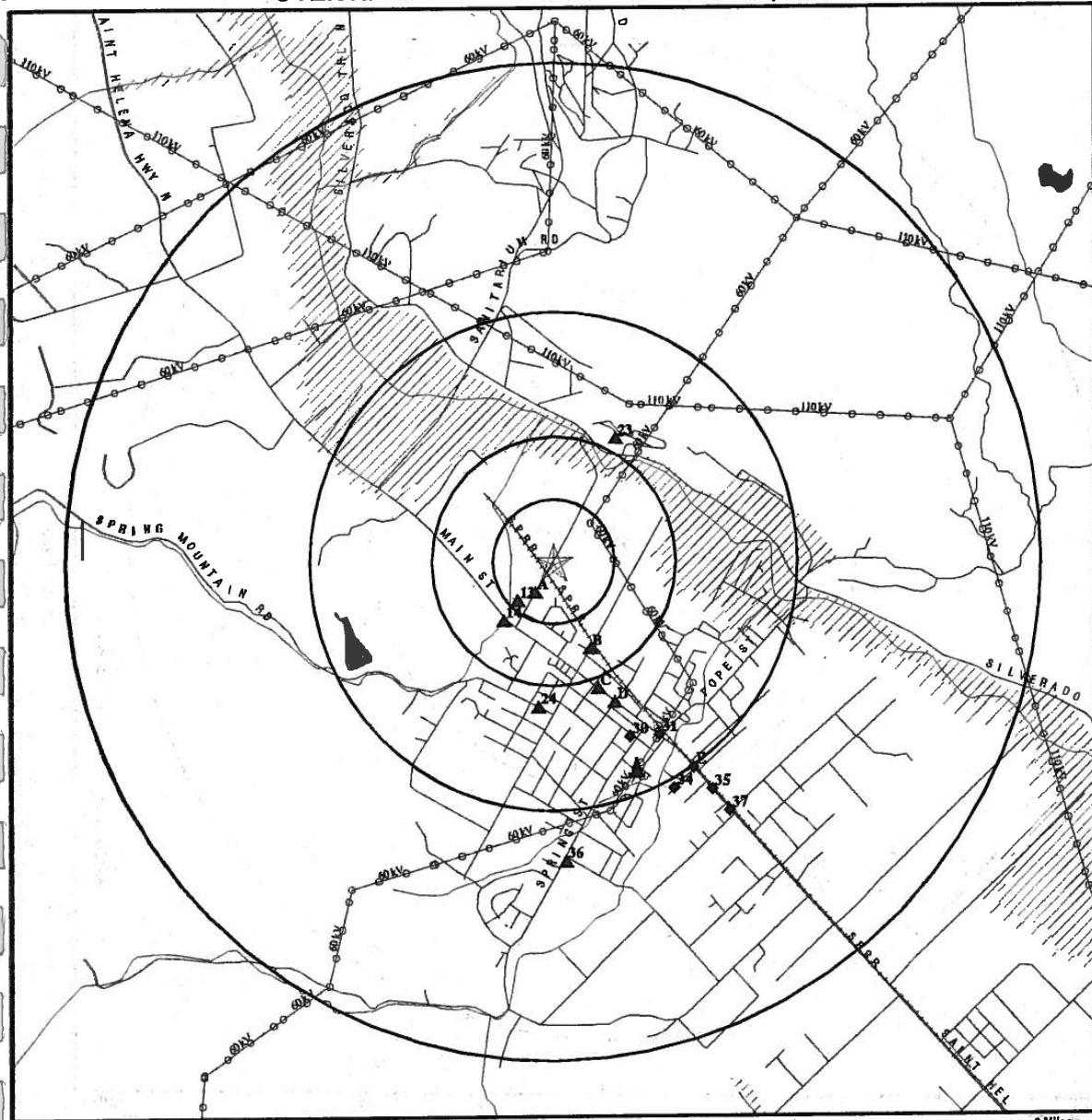
A review of the LUST list, as provided by EDR, and dated 04/02/2003 has revealed that there are 12 LUST sites within approximately 0.75 miles of the target property.

| <u>Equal/Higher Elevation</u>         | <u>Address</u>                 | <u>Dist / Dir</u>    | <u>Map ID</u> | <u>Page</u> |
|---------------------------------------|--------------------------------|----------------------|---------------|-------------|
| <b>BERINGER VINEYARDS</b>             | <b>2000 MAIN ST</b>            | <b>1/4 - 1/2 SW</b>  | <b>14</b>     | <b>14</b>   |
| <b>ABRUZZINI PROPERTY</b>             | <b>1030 FULTON LN</b>          | <b>1/4 - 1/2 SSE</b> | <b>B15</b>    | <b>16</b>   |
| <b>ABRUZZINI PROPERTY</b>             | <b>1030 FULTON LANE</b>        | <b>1/4 - 1/2 SSE</b> | <b>B16</b>    | <b>17</b>   |
| <b>HELEN PASCHICH ESTATE</b>          | <b>1078 FULTON LANE</b>        | <b>1/4 - 1/2 SSE</b> | <b>B19</b>    | <b>18</b>   |
| <b>ST HELENA POLICE DEPARTMENT</b>    | <b>1480 MAIN ST</b>            | <b>1/2 - 1 SSE</b>   | <b>C21</b>    | <b>20</b>   |
| <b>ST. HELENA CITY POLICE DEPARTM</b> | <b>1480 MAIN ST</b>            | <b>1/2 - 1 SSE</b>   | <b>C22</b>    | <b>22</b>   |
| <b>GIN PROPERTY</b>                   | <b>3473 ST HELENA HWY</b>      | <b>1/2 - 1 NNE</b>   | <b>23</b>     | <b>22</b>   |
| <b>JAEGER PROPERTY</b>                | <b>1665 SPRING MOUNTAIN RD</b> | <b>1/2 - 1 S</b>     | <b>24</b>     | <b>23</b>   |
| <b>ST. HELENA CHEVRON STATION #90</b> | <b>1400 MAIN ST</b>            | <b>1/2 - 1 SSE</b>   | <b>D25</b>    | <b>25</b>   |
| <b>CHEVRON</b>                        | <b>1400 MAIN ST</b>            | <b>1/2 - 1 SSE</b>   | <b>D26</b>    | <b>25</b>   |
| <b>MAIN STREET SERVICE</b>            | <b>1380 MAIN ST</b>            | <b>1/2 - 1 SSE</b>   | <b>D27</b>    | <b>27</b>   |
| <b>UNION 76</b>                       | <b>1380 MAIN ST</b>            | <b>1/2 - 1 SSE</b>   | <b>D28</b>    | <b>27</b>   |

**UST:** The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, and dated 04/02/2003 has revealed that there are 4 UST sites within approximately 0.5 miles of the target property.

OVERVIEW MAP - 1089548.4s - Kleinfelder, Inc.



★ Target Property

▲ Sites at elevations higher than or equal to the target property

◆ Sites at elevations lower than the target property

▲ Coal Gasification Sites

■ National Priority List Sites

■ Landfill Sites

■ Dept. Defense Sites

Power transmission lines

Oil & Gas pipelines

100-year flood zone

500-year flood zone

Areas of Concern

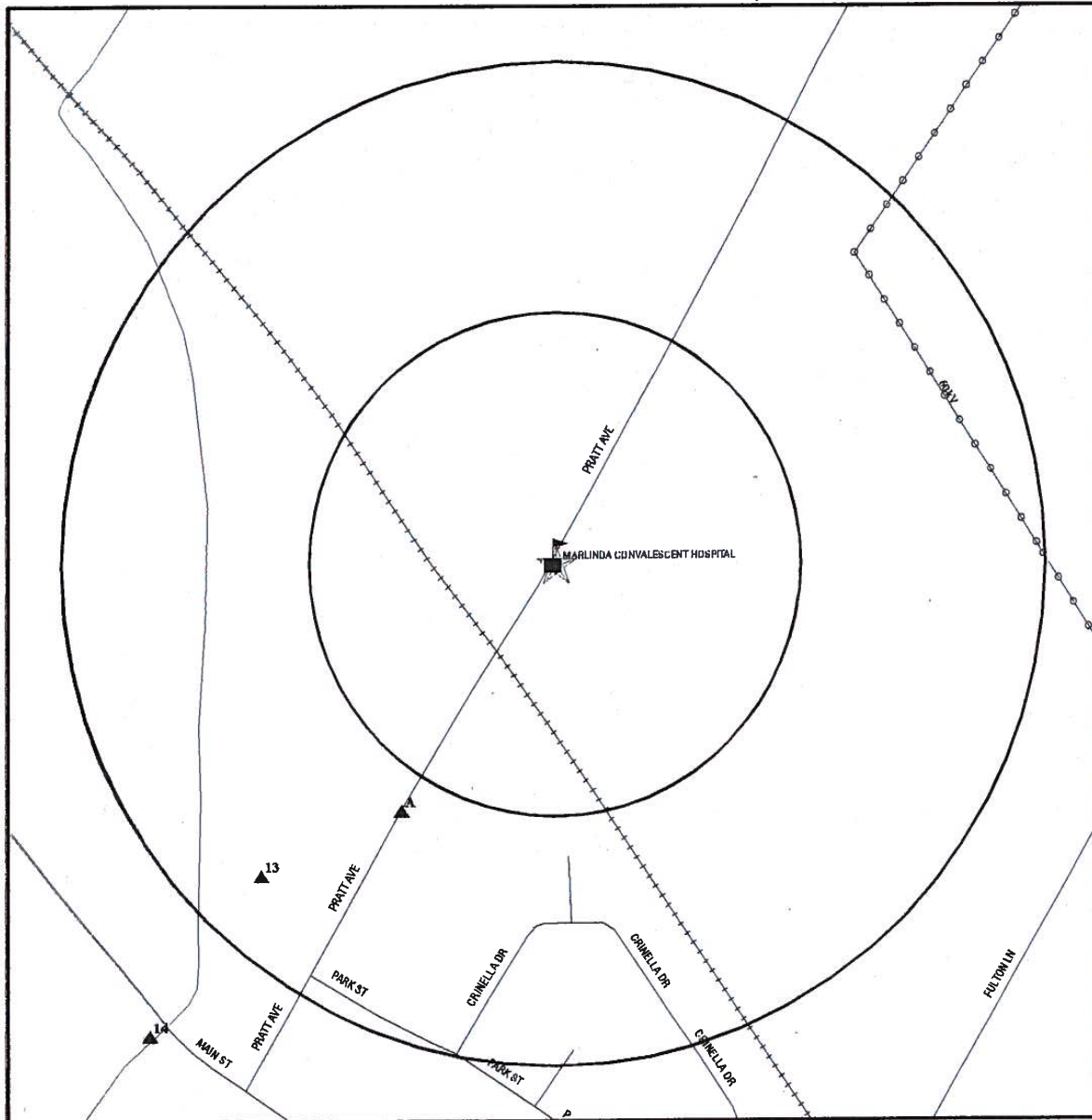
**TARGET PROPERTY:** 830 Pratt Avenue  
**ADDRESS:** 830 Pratt Avenue  
**CITY/STATE/ZIP:** St. Helena CA 94574  
**LAT/LONG:** 38.5134 / 122.4750

**CUSTOMER:** Kleinfelder, Inc.  
**CONTACT:** Jennifer Gomez  
**INQUIRY #:** 1089548.4s  
**DATE:** November 26, 2003 1:00 pm

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**DETAIL MAP - 1089548.4s - Kleinfelder, Inc.**



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Coal Gasification Sites
- Historical Gas Stations / Historical Dry Cleaners  
See the EDR Proprietary Historical Map Findings
- ↓ Sensitive Receptors
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites

- Power transmission lines
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone

Areas of Concern



**TARGET PROPERTY:** 830 Pratt Avenue  
**ADDRESS:** 830 Pratt Avenue  
**CITY/STATE/ZIP:** St. Helena CA 94574  
**LAT/LONG:** 38.5134 / 122.4750

**CUSTOMER:** Kleinfelder, Inc.  
**CONTACT:** Jennifer Gomez  
**INQUIRY #:** 1089548.4s  
**DATE:** November 26, 2003 1:01 pm

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|                             |
|-----------------------------|
| <b>MAP FINDINGS SUMMARY</b> |
|-----------------------------|

| Database                                       | Target<br>Property | Search<br>Distance<br>(Miles) | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total<br>Plotted |
|------------------------------------------------|--------------------|-------------------------------|-------|-----------|-----------|---------|-----|------------------|
| <b><u>FEDERAL ASTM STANDARD</u></b>            |                    |                               |       |           |           |         |     |                  |
| NPL                                            |                    | 1.250                         | 0     | 0         | 0         | 0       | 0   | 0                |
| Proposed NPL                                   |                    | 1.250                         | 0     | 0         | 0         | 0       | 0   | 0                |
| CERCLIS                                        |                    | 0.750                         | 0     | 0         | 0         | 0       | NR  | 0                |
| CERC-NFRAP                                     |                    | 0.500                         | 0     | 0         | 0         | NR      | NR  | 0                |
| CORRACTS                                       |                    | 1.250                         | 0     | 0         | 0         | 0       | 0   | 0                |
| RCRIS-TSD                                      |                    | 0.750                         | 0     | 0         | 0         | 0       | NR  | 0                |
| RCRIS Lg. Quan. Gen.                           |                    | 0.500                         | 0     | 0         | 0         | NR      | NR  | 0                |
| RCRIS Sm. Quan. Gen.                           |                    | 0.500                         | 0     | 0         | 0         | NR      | NR  | 0                |
| ERNS                                           |                    | 0.250                         | 0     | 7         | NR        | NR      | NR  | 7                |
| <b><u>STATE ASTM STANDARD</u></b>              |                    |                               |       |           |           |         |     |                  |
| AWP                                            |                    | 1.250                         | 0     | 0         | 0         | 0       | 0   | 0                |
| Cal-Sites                                      |                    | 1.250                         | 0     | 0         | 0         | 0       | 0   | 0                |
| CHMIRS                                         |                    | 1.250                         | 0     | 4         | 0         | 1       | 0   | 5                |
| Cortese                                        |                    | 1.250                         | 0     | 0         | 3         | 6       | 6   | 15               |
| Notify 65                                      |                    | 1.250                         | 0     | 0         | 0         | 0       | 0   | 0                |
| Toxic Pits                                     |                    | 1.250                         | 0     | 0         | 0         | 0       | 0   | 0                |
| State Landfill                                 |                    | 0.750                         | 0     | 0         | 0         | 0       | NR  | 0                |
| WMUDS/SWAT                                     |                    | 0.750                         | 0     | 0         | 0         | 0       | NR  | 0                |
| LUST                                           |                    | 0.750                         | 0     | 0         | 4         | 8       | NR  | 12               |
| CA Bond Exp. Plan                              |                    | 1.250                         | 0     | 0         | 0         | 0       | 0   | 0                |
| UST                                            |                    | 0.500                         | 0     | 0         | 4         | NR      | NR  | 4                |
| VCP                                            |                    | 0.750                         | 0     | 0         | 0         | 0       | NR  | 0                |
| INDIAN UST                                     |                    | 0.500                         | 0     | 0         | 0         | NR      | NR  | 0                |
| CA FID UST                                     |                    | 0.500                         | 0     | 0         | 1         | NR      | NR  | 1                |
| HIST UST                                       |                    | 0.250                         | 0     | 1         | NR        | NR      | NR  | 1                |
| <b><u>FEDERAL ASTM SUPPLEMENTAL</u></b>        |                    |                               |       |           |           |         |     |                  |
| CONSENT                                        |                    | 1.000                         | 0     | 0         | 0         | 0       | NR  | 0                |
| ROD                                            |                    | 1.000                         | 0     | 0         | 0         | 0       | NR  | 0                |
| Delisted NPL                                   |                    | 1.000                         | 0     | 0         | 0         | 0       | NR  | 0                |
| FINDS                                          | TP                 |                               | NR    | NR        | NR        | NR      | NR  | 0                |
| HMIRS                                          | TP                 |                               | NR    | NR        | NR        | NR      | NR  | 0                |
| MLTS                                           | TP                 |                               | NR    | NR        | NR        | NR      | NR  | 0                |
| MINES                                          |                    | 0.250                         | 0     | 0         | NR        | NR      | NR  | 0                |
| NPL Liens                                      | TP                 |                               | NR    | NR        | NR        | NR      | NR  | 0                |
| PADS                                           | TP                 |                               | NR    | NR        | NR        | NR      | NR  | 0                |
| DOD                                            |                    | 1.000                         | 0     | 0         | 0         | 0       | NR  | 0                |
| US BROWNFIELDS                                 |                    | 0.500                         | 0     | 0         | 0         | NR      | NR  | 0                |
| RAATS                                          | TP                 |                               | NR    | NR        | NR        | NR      | NR  | 0                |
| TRIS                                           | TP                 |                               | NR    | NR        | NR        | NR      | NR  | 0                |
| TSCA                                           | TP                 |                               | NR    | NR        | NR        | NR      | NR  | 0                |
| SSTS                                           | TP                 |                               | NR    | NR        | NR        | NR      | NR  | 0                |
| FTTS                                           | TP                 |                               | NR    | NR        | NR        | NR      | NR  | 0                |
| <b><u>STATE OR LOCAL ASTM SUPPLEMENTAL</u></b> |                    |                               |       |           |           |         |     |                  |
| AST                                            |                    | TP                            | NR    | NR        | NR        | NR      | NR  | 0                |

|                             |
|-----------------------------|
| <b>MAP FINDINGS SUMMARY</b> |
|-----------------------------|

| Database | Target<br>Property | Search<br>Distance<br>(Miles) | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total<br>Plotted |
|----------|--------------------|-------------------------------|-------|-----------|-----------|---------|-----|------------------|
| CLEANERS |                    | 0.250                         | 0     | 0         | NR        | NR      | NR  | 0                |
| CA WDS   | TP                 |                               | NR    | NR        | NR        | NR      | NR  | 0                |
| DEED     | TP                 |                               | NR    | NR        | NR        | NR      | NR  | 0                |
| NFA      |                    | 0.250                         | 0     | 0         | NR        | NR      | NR  | 0                |
| EMI      | TP                 |                               | NR    | NR        | NR        | NR      | NR  | 0                |
| REF      |                    | 0.250                         | 0     | 0         | NR        | NR      | NR  | 0                |
| SCH      |                    | 0.250                         | 0     | 0         | NR        | NR      | NR  | 0                |
| NFE      |                    | 0.250                         | 0     | 0         | NR        | NR      | NR  | 0                |
| CA SLIC  |                    | 0.500                         | 0     | 0         | 0         | NR      | NR  | 0                |
| HAZNET   |                    | 0.250                         | 0     | 1         | NR        | NR      | NR  | 1                |

**EDR PROPRIETARY HISTORICAL DATABASES**

|                           |       |   |   |    |    |    |   |
|---------------------------|-------|---|---|----|----|----|---|
| Gas Stations/Dry Cleaners | 0.250 | 0 | 0 | NR | NR | NR | 0 |
| Coal Gas                  | 1.000 | 0 | 0 | 0  | 1  | NR | 1 |

**BROWNFIELDS DATABASES**

|                |       |   |   |   |    |    |   |
|----------------|-------|---|---|---|----|----|---|
| US BROWNFIELDS | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| VCP            | 0.750 | 0 | 0 | 0 | 0  | NR | 0 |

**NOTES:**

See the EDR Proprietary Historical Database Section for details

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

A1  
SSW  
1/8-1/4  
765 ft.

LINO GUIDICI  
999 PRATT AVE  
SAINT HELENA, CA 94574

HIST UST

U001598317  
N/A

Site 1 of 12 in cluster A

Relative:  
Higher

UST HIST:

Facility ID: 59648

Facility Status: Not reported

Total Tanks: 1

Region: STATE

Actual:  
261 ft.

Owner Name: LINO GUIDICI

Box Number: Not reported

Owner Address: 999 PRATT AVE.

SAINT HELENA, CA 94574

A2  
SSW  
1/8-1/4  
776 ft.

1000 PRATT AVE.  
SAINT HELENA, CA 02903

CHMIRS

S105670184  
N/A

Site 2 of 12 in cluster A

Relative:  
Higher

CHMIRS:

OES Control Number:

02-6990

Chemical Name:

Cabernet Wine

Extent of Release:

Not reported

Property Use:

Not reported

Incident Date:

Not reported

Date Completed:

Not reported

Time Completed :

Not reported

Agency Id Number :

Not reported

Agency Incident Number :

Not reported

OES Incident Number :

02-6990

Time Notified :

Not reported

Surrounding Area :

Not reported

Estimated Temperature :

Not reported

Property Management :

Not reported

More Than Two Substances Involved? :

Not reported

Special Studies 1 :

Not reported

Special Studies 2 :

Not reported

Special Studies 3 :

Not reported

Special Studies 4 :

Not reported

Special Studies 5 :

Not reported

Special Studies 6 :

Not reported

Responding Agency Personnel # Of Injuries : 0

Responding Agency Personnel # Of Fatalities : 0

Resp Agency Personnel # Of Decontaminated : Not reported

Others Number Of Decontaminated : Not reported

Others Number Of Injuries : Not reported

Others Number Of Fatalities : Not reported

Vehicle Make/year : Not reported

Vehicle License Number : Not reported

Vehicle State : Not reported

Vehicle Id Number : Not reported

CA/DOT/PUC/ICC Number : Not reported

Company Name : Not reported

Reporting Officer Name/ID : Not reported

Report Date : Not reported

Comments : Not reported

Facility Telephone Number : Not reported

Waterway Involved : Yes

Waterway : York Creek

Spill Site : Merchant/Business

Cleanup By : Reporting Party

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s)

EDR ID Number  
EPA ID Number

(Continued)

S105670184

|                                               |                                                                                                                                                                                                                                                             |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Containment :                                 | Yes                                                                                                                                                                                                                                                         |
| What Happened :                               | Release was discovered this morning coming out of a partially opened valve.                                                                                                                                                                                 |
| Type :                                        | Gal(s)                                                                                                                                                                                                                                                      |
| Other :                                       | Not reported                                                                                                                                                                                                                                                |
| Chemical 1 :                                  | Not Reported                                                                                                                                                                                                                                                |
| Chemical 2 :                                  | Not Reported                                                                                                                                                                                                                                                |
| Chemical 3 :                                  | Not Reported                                                                                                                                                                                                                                                |
| Date/Time :                                   | 12/23/2002 0001                                                                                                                                                                                                                                             |
| Evacuations :                                 | 0                                                                                                                                                                                                                                                           |
| OES Control Number:                           | 01-7036                                                                                                                                                                                                                                                     |
| Chemical Name:                                | Treated winery waste water                                                                                                                                                                                                                                  |
| Extent of Release:                            | Not reported                                                                                                                                                                                                                                                |
| Property Use:                                 | Not reported                                                                                                                                                                                                                                                |
| Incident Date:                                | Not reported                                                                                                                                                                                                                                                |
| Date Completed:                               | Not reported                                                                                                                                                                                                                                                |
| Time Completed :                              | Not reported                                                                                                                                                                                                                                                |
| Agency Id Number :                            | Not reported                                                                                                                                                                                                                                                |
| Agency Incident Number :                      | Not reported                                                                                                                                                                                                                                                |
| OES Incident Number :                         | 01-7036                                                                                                                                                                                                                                                     |
| Time Notified :                               | Not reported                                                                                                                                                                                                                                                |
| Surrounding Area :                            | Not reported                                                                                                                                                                                                                                                |
| Estimated Temperature :                       | Not reported                                                                                                                                                                                                                                                |
| Property Management :                         | Not reported                                                                                                                                                                                                                                                |
| More Than Two Substances Involved? :          | Not reported                                                                                                                                                                                                                                                |
| Special Studies 1 :                           | Not reported                                                                                                                                                                                                                                                |
| Special Studies 2 :                           | Not reported                                                                                                                                                                                                                                                |
| Special Studies 3 :                           | Not reported                                                                                                                                                                                                                                                |
| Special Studies 4 :                           | Not reported                                                                                                                                                                                                                                                |
| Special Studies 5 :                           | Not reported                                                                                                                                                                                                                                                |
| Special Studies 6 :                           | Not reported                                                                                                                                                                                                                                                |
| Responding Agency Personnel # Of Injuries :   | 0                                                                                                                                                                                                                                                           |
| Responding Agency Personnel # Of Fatalities : | 0                                                                                                                                                                                                                                                           |
| Resp Agency Personnel # Of Decontaminated :   | Not reported                                                                                                                                                                                                                                                |
| Others Number Of Decontaminated :             | Not reported                                                                                                                                                                                                                                                |
| Others Number Of Injuries :                   | Not reported                                                                                                                                                                                                                                                |
| Others Number Of Fatalities :                 | Not reported                                                                                                                                                                                                                                                |
| Vehicle Make/year :                           | Not reported                                                                                                                                                                                                                                                |
| Vehicle License Number :                      | Not reported                                                                                                                                                                                                                                                |
| Vehicle State :                               | Not reported                                                                                                                                                                                                                                                |
| Vehicle Id Number :                           | Not reported                                                                                                                                                                                                                                                |
| CA/DOT/PUC/CC Number :                        | Not reported                                                                                                                                                                                                                                                |
| Company Name :                                | Not reported                                                                                                                                                                                                                                                |
| Reporting Officer Name/ID :                   | Not reported                                                                                                                                                                                                                                                |
| Report Date :                                 | Not reported                                                                                                                                                                                                                                                |
| Comments :                                    | Not reported                                                                                                                                                                                                                                                |
| Facility Telephone Number :                   | Not reported                                                                                                                                                                                                                                                |
| Waterway Involved :                           | Yes                                                                                                                                                                                                                                                         |
| Waterway :                                    | York Creek                                                                                                                                                                                                                                                  |
| Spill Site :                                  | Other                                                                                                                                                                                                                                                       |
| Cleanup By :                                  | Unknown                                                                                                                                                                                                                                                     |
| Containment :                                 | Yes                                                                                                                                                                                                                                                         |
| What Happened :                               | RP's neighbor advised her of physical failure of the dike which caused this release. The fluids flowed into York Creek which feeds into the Napa River. The Napa River is not believed to be a source of drinking water. Samples have been taken to determi |

| Map ID       | Direction | Distance         | Distance (ft.)                                                                                                                                   | Elevation                                                      | Site | Database(s) | EDR ID Number | EPA ID Number     |
|--------------|-----------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|------|-------------|---------------|-------------------|
| MAP FINDINGS |           |                  |                                                                                                                                                  |                                                                |      |             |               |                   |
| (Continued)  |           |                  |                                                                                                                                                  |                                                                |      |             | S105670184    |                   |
|              |           | Type :           | CHEMICAL                                                                                                                                         |                                                                |      |             |               |                   |
|              |           | Other :          | Not reported                                                                                                                                     |                                                                |      |             |               |                   |
|              |           | Chemical 1 :     | Not Reported                                                                                                                                     |                                                                |      |             |               |                   |
|              |           | Chemical 2 :     | Not Reported                                                                                                                                     |                                                                |      |             |               |                   |
|              |           | Chemical 3 :     | Not Reported                                                                                                                                     |                                                                |      |             |               |                   |
|              |           | Date/Time :      | 12/4/01 1515                                                                                                                                     |                                                                |      |             |               |                   |
|              |           | Evacuations :    | 0                                                                                                                                                |                                                                |      |             |               |                   |
| A3           | SSW       | 1/8-1/4          | 776 ft.                                                                                                                                          | 1000 PRATT AVE<br>1000 PRATT AVE<br>ST. HELENA, CA 94574       |      |             | ERNS          | 93338307<br>N/A   |
|              |           |                  |                                                                                                                                                  | Site 3 of 12 in cluster A                                      |      |             |               |                   |
| Relative:    |           | Higher           | The ERNS database may contain additional details for this site.<br>Please click here or contact your EDR Account Executive for more information. |                                                                |      |             |               |                   |
| Actual:      |           | 261 ft.          |                                                                                                                                                  |                                                                |      |             |               |                   |
| A4           | SSW       | 1/8-1/4          | 776 ft.                                                                                                                                          | 1000 PRATT AVENUE<br>1000 PRATT AVENUE<br>ST. HELENA, CA 94574 |      |             | ERNS          | 91466561<br>N/A   |
|              |           |                  |                                                                                                                                                  | Site 4 of 12 in cluster A                                      |      |             |               |                   |
| Relative:    |           | Higher           | The ERNS database may contain additional details for this site.<br>Please click here or contact your EDR Account Executive for more information. |                                                                |      |             |               |                   |
| Actual:      |           | 261 ft.          |                                                                                                                                                  |                                                                |      |             |               |                   |
| A5           | SSW       | 1/8-1/4          | 776 ft.                                                                                                                                          | 1000 PRATT AVE<br>1000 PRATT AVE<br>ST. HELENA, CA 94574       |      |             | ERNS          | 93319779<br>N/A   |
|              |           |                  |                                                                                                                                                  | Site 5 of 12 in cluster A                                      |      |             |               |                   |
| Relative:    |           | Higher           | The ERNS database may contain additional details for this site.<br>Please click here or contact your EDR Account Executive for more information. |                                                                |      |             |               |                   |
| Actual:      |           | 261 ft.          |                                                                                                                                                  |                                                                |      |             |               |                   |
| A6           | SSW       | 1/8-1/4          | 776 ft.                                                                                                                                          | BERINGER VINEYARDS<br>1000 PRATT AVE<br>ST. HELENA, CA 94574   |      |             | HAZNET        | 1000593014<br>N/A |
|              |           |                  |                                                                                                                                                  | Site 6 of 12 in cluster A                                      |      |             |               |                   |
| Relative:    |           | Higher           | HAZNET:                                                                                                                                          |                                                                |      |             |               |                   |
|              |           | Gepaid:          | CAL000049240                                                                                                                                     |                                                                |      |             |               |                   |
|              |           | TSD EPA ID:      | CAT080014079                                                                                                                                     |                                                                |      |             |               |                   |
|              |           | Gen County:      | Napa                                                                                                                                             |                                                                |      |             |               |                   |
|              |           | Tsd County:      | 7                                                                                                                                                |                                                                |      |             |               |                   |
|              |           | Tons:            | 5.0275                                                                                                                                           |                                                                |      |             |               |                   |
|              |           | Waste Category:  | Off-specification, aged, or surplus organics                                                                                                     |                                                                |      |             |               |                   |
|              |           | Disposal Method: | Transfer Station                                                                                                                                 |                                                                |      |             |               |                   |
|              |           | Contact:         | BERINGER WINE ESTATES                                                                                                                            |                                                                |      |             |               |                   |
|              |           | Telephone:       | (707) 963-7115                                                                                                                                   |                                                                |      |             |               |                   |
|              |           | Mailing Address: | PO BOX 111<br>SAINT HELENA, CA 94574 - 0111                                                                                                      |                                                                |      |             |               |                   |
|              |           | County           | Napa                                                                                                                                             |                                                                |      |             |               |                   |

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation Site

## MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

## BERINGER VINEYARDS (Continued)

1000593014

Gepaid: CAL000049240  
TSD EPA ID: CAT080014079  
Gen County: Napa  
Tsd County: 7  
Tons: .3500  
Waste Category: Laboratory waste chemicals  
Disposal Method: Transfer Station  
Contact: BERINGER WINE ESTATES  
Telephone: (707) 963-7115  
Mailing Address: PO BOX 111  
SAINT HELENA, CA 94574 - 0111  
County: Napa

Gepaid: CAL000049240  
TSD EPA ID: CAT080014079  
Gen County: Napa  
Tsd County: 7  
Tons: .0030  
Waste Category: Other organic solids  
Disposal Method: Transfer Station  
Contact: BERINGER WINE ESTATES  
Telephone: (707) 963-7115  
Mailing Address: PO BOX 111  
SAINT HELENA, CA 94574 - 0111  
County: Napa

Gepaid: CAL000049240  
TSD EPA ID: CAT080014079  
Gen County: Napa  
Tsd County: 7  
Tons: 2.3350  
Waste Category: Off-specification, aged, or surplus inorganics  
Disposal Method: Transfer Station  
Contact: BERINGER WINE ESTATES  
Telephone: (707) 963-7115  
Mailing Address: PO BOX 111  
SAINT HELENA, CA 94574 - 0111  
County: Napa

Gepaid: CAL000049240  
TSD EPA ID: CAD980884183  
Gen County: Napa  
Tsd County: Sacramento  
Tons: .1850  
Waste Category: Off-specification, aged, or surplus organics  
Disposal Method: Transfer Station  
Contact: BERINGER WINE ESTATES  
Telephone: (707) 963-7115  
Mailing Address: PO BOX 111  
SAINT HELENA, CA 94574 - 0111  
County: Napa

The CA HAZNET database contains 7 additional records for this site.  
Please click [here](#) or contact your EDR Account Executive for more information.

| Map ID                         | Direction                                                                                                                                        | Distance | Distance (ft.) | Elevation | Site                                                     | Database(s) | EDR ID Number | EPA ID Number |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------|-----------|----------------------------------------------------------|-------------|---------------|---------------|
| MAP FINDINGS                   |                                                                                                                                                  |          |                |           |                                                          |             |               |               |
| BERINGER VINEYARDS (Continued) |                                                                                                                                                  |          |                |           |                                                          |             | 1000593014    |               |
| A7                             | SSW                                                                                                                                              | 1/8-1/4  | 776 ft.        |           | 1000 PRATT AVENUE<br>1000 PRATT AVENUE<br>ST. HELENA, CA | ERNS        | 91209327      | N/A           |
| Site 7 of 12 in cluster A      |                                                                                                                                                  |          |                |           |                                                          |             |               |               |
| Relative:                      |                                                                                                                                                  |          |                |           |                                                          |             |               |               |
| Higher                         | The ERNS database may contain additional details for this site.<br>Please click here or contact your EDR Account Executive for more information. |          |                |           |                                                          |             |               |               |
| Actual:                        |                                                                                                                                                  |          |                |           |                                                          |             |               |               |
| 261 ft.                        |                                                                                                                                                  |          |                |           |                                                          |             |               |               |
| A8                             | SSW                                                                                                                                              | 1/8-1/4  | 776 ft.        |           | 1000 PRATT AV<br>SAINT HELENA, CA 29038                  | CHMIRS      | S105661872    | N/A           |
| Site 8 of 12 in cluster A      |                                                                                                                                                  |          |                |           |                                                          |             |               |               |
| Relative:                      |                                                                                                                                                  |          |                |           |                                                          |             |               |               |
| Higher                         | CHMIRS:                                                                                                                                          |          |                |           |                                                          |             |               |               |
| Actual:                        |                                                                                                                                                  |          |                |           |                                                          |             |               |               |
| 261 ft.                        |                                                                                                                                                  |          |                |           |                                                          |             |               |               |
|                                | OES Control Number: 99-1845                                                                                                                      |          |                |           |                                                          |             |               |               |
|                                | Chemical Name: Mercury                                                                                                                           |          |                |           |                                                          |             |               |               |
|                                | Extent of Release: Not reported                                                                                                                  |          |                |           |                                                          |             |               |               |
|                                | Property Use: Not reported                                                                                                                       |          |                |           |                                                          |             |               |               |
|                                | Incident Date: Not reported                                                                                                                      |          |                |           |                                                          |             |               |               |
|                                | Date Completed: Not reported                                                                                                                     |          |                |           |                                                          |             |               |               |
|                                | Time Completed : Not reported                                                                                                                    |          |                |           |                                                          |             |               |               |
|                                | Agency Id Number : Not reported                                                                                                                  |          |                |           |                                                          |             |               |               |
|                                | Agency Incident Number : Not reported                                                                                                            |          |                |           |                                                          |             |               |               |
|                                | OES Incident Number : 99-1845                                                                                                                    |          |                |           |                                                          |             |               |               |
|                                | Time Notified : Not reported                                                                                                                     |          |                |           |                                                          |             |               |               |
|                                | Surrounding Area : Not reported                                                                                                                  |          |                |           |                                                          |             |               |               |
|                                | Estimated Temperature : Not reported                                                                                                             |          |                |           |                                                          |             |               |               |
|                                | Property Management : Not reported                                                                                                               |          |                |           |                                                          |             |               |               |
|                                | More Than Two Substances Involved? : Not reported                                                                                                |          |                |           |                                                          |             |               |               |
|                                | Special Studies 1 : Not reported                                                                                                                 |          |                |           |                                                          |             |               |               |
|                                | Special Studies 2 : Not reported                                                                                                                 |          |                |           |                                                          |             |               |               |
|                                | Special Studies 3 : Not reported                                                                                                                 |          |                |           |                                                          |             |               |               |
|                                | Special Studies 4 : Not reported                                                                                                                 |          |                |           |                                                          |             |               |               |
|                                | Special Studies 5 : Not reported                                                                                                                 |          |                |           |                                                          |             |               |               |
|                                | Special Studies 6 : Not reported                                                                                                                 |          |                |           |                                                          |             |               |               |
|                                | Responding Agency Personnel # Of Injuries : 0                                                                                                    |          |                |           |                                                          |             |               |               |
|                                | Responding Agency Personnel # Of Fatalities : 0                                                                                                  |          |                |           |                                                          |             |               |               |
|                                | Resp Agency Personnel # Of Decontaminated : Not reported                                                                                         |          |                |           |                                                          |             |               |               |
|                                | Others Number Of Decontaminated : Not reported                                                                                                   |          |                |           |                                                          |             |               |               |
|                                | Others Number Of Injuries : Not reported                                                                                                         |          |                |           |                                                          |             |               |               |
|                                | Others Number Of Fatalities : Not reported                                                                                                       |          |                |           |                                                          |             |               |               |
|                                | Vehicle Make/year : Not reported                                                                                                                 |          |                |           |                                                          |             |               |               |
|                                | Vehicle License Number : Not reported                                                                                                            |          |                |           |                                                          |             |               |               |
|                                | Vehicle State : Not reported                                                                                                                     |          |                |           |                                                          |             |               |               |
|                                | Vehicle Id Number : Not reported                                                                                                                 |          |                |           |                                                          |             |               |               |
|                                | CA/DOT/PUC/ICC Number : Not reported                                                                                                             |          |                |           |                                                          |             |               |               |
|                                | Company Name : Not reported                                                                                                                      |          |                |           |                                                          |             |               |               |
|                                | Reporting Officer Name/ID : Not reported                                                                                                         |          |                |           |                                                          |             |               |               |
|                                | Report Date : Not reported                                                                                                                       |          |                |           |                                                          |             |               |               |
|                                | Comments : Not reported                                                                                                                          |          |                |           |                                                          |             |               |               |
|                                | Facility Telephone Number : Not reported                                                                                                         |          |                |           |                                                          |             |               |               |
|                                | Waterway Involved : No                                                                                                                           |          |                |           |                                                          |             |               |               |
|                                | Waterway : Not reported                                                                                                                          |          |                |           |                                                          |             |               |               |
|                                | Spill Site : Industrial Plant                                                                                                                    |          |                |           |                                                          |             |               |               |
|                                | Cleanup By : Reporting Party                                                                                                                     |          |                |           |                                                          |             |               |               |



Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s)

EDR ID Number  
EPA ID Number

(Continued)

S105661872

Containment : Yes  
What Happened : Cutting through a temperature probe, unaware of mercury content until it spilled.  
Type : CHEMICAL  
Other : Not reported  
Chemical 1 : Not Reported  
Chemical 2 : Not Reported  
Chemical 3 : Not Reported  
Date/Time : 4/27/99 1100  
Evacuations : 0

A9  
SSW  
1/8-1/4  
776 ft.

1000 PRATT AVE  
SAINT HELENA, CA 0

CHMIRS S105654932  
N/A

Site 9 of 12 in cluster A

Relative:  
Higher

CHMIRS:

Actual:  
261 ft.

OES Control Number: 00-6036  
Chemical Name: waste water  
Extent of Release: Not reported  
Property Use: Not reported  
Incident Date: Not reported  
Date Completed: Not reported  
Time Completed : Not reported  
Agency Id Number : Not reported  
Agency Incident Number : Not reported  
OES Incident Number : 00-6036  
Time Notified : Not reported  
Surrounding Area : Not reported  
Estimated Temperature : Not reported  
Property Management : Not reported  
More Than Two Substances Involved? : Not reported  
Special Studies 1 : Not reported  
Special Studies 2 : Not reported  
Special Studies 3 : Not reported  
Special Studies 4 : Not reported  
Special Studies 5 : Not reported  
Special Studies 6 : Not reported  
Responding Agency Personnel # Of Injuries : 0  
Responding Agency Personnel # Of Fatalities : 0  
Resp Agency Personnel # Of Decontaminated : Not reported  
Others Number Of Decontaminated : Not reported  
Others Number Of Injuries : Not reported  
Others Number Of Fatalities : Not reported  
Vehicle Make/year : Not reported  
Vehicle License Number : Not reported  
Vehicle State : Not reported  
Vehicle Id Number : Not reported  
CA/DOT/PUC/ICC Number : Not reported  
Company Name : Not reported  
Reporting Officer Name/ID : Not reported  
Report Date : Not reported  
Comments : Not reported  
Facility Telephone Number : Not reported  
Waterway Involved : Yes  
Waterway : York Creek  
Spill Site : Merchant/Business  
Cleanup By : Reporting Party

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

Site

MAP FINDINGS

Database(s)

EDR ID Number

EPA ID Number

(Continued)

S105654932

|                                               |                                                                                                                                                                              |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Containment :                                 | No                                                                                                                                                                           |
| What Happened :                               | a pump failed and overflowed the catch basin which went to a creek                                                                                                           |
| Type :                                        | OTHER                                                                                                                                                                        |
| Other :                                       | from wine processing                                                                                                                                                         |
| Chemical 1 :                                  | Not Reported                                                                                                                                                                 |
| Chemical 2 :                                  | Not Reported                                                                                                                                                                 |
| Chemical 3 :                                  | Not Reported                                                                                                                                                                 |
| Date/Time :                                   | 12/19/00 815                                                                                                                                                                 |
| Evacuations :                                 | 0                                                                                                                                                                            |
| OES Control Number:                           | 98-3634                                                                                                                                                                      |
| Chemical Name:                                | Ammonia                                                                                                                                                                      |
| Extent of Release:                            | Not reported                                                                                                                                                                 |
| Property Use:                                 | Not reported                                                                                                                                                                 |
| Incident Date:                                | Not reported                                                                                                                                                                 |
| Date Completed:                               | Not reported                                                                                                                                                                 |
| Time Completed :                              | Not reported                                                                                                                                                                 |
| Agency Id Number :                            | Not reported                                                                                                                                                                 |
| Agency Incident Number :                      | Not reported                                                                                                                                                                 |
| OES Incident Number :                         | 98-3634                                                                                                                                                                      |
| Time Notified :                               | Not reported                                                                                                                                                                 |
| Surrounding Area :                            | Not reported                                                                                                                                                                 |
| Estimated Temperature :                       | Not reported                                                                                                                                                                 |
| Property Management :                         | Not reported                                                                                                                                                                 |
| More Than Two Substances Involved? :          | Not reported                                                                                                                                                                 |
| Special Studies 1 :                           | Not reported                                                                                                                                                                 |
| Special Studies 2 :                           | Not reported                                                                                                                                                                 |
| Special Studies 3 :                           | Not reported                                                                                                                                                                 |
| Special Studies 4 :                           | Not reported                                                                                                                                                                 |
| Special Studies 5 :                           | Not reported                                                                                                                                                                 |
| Special Studies 6 :                           | Not reported                                                                                                                                                                 |
| Responding Agency Personnel # Of Injuries :   | 0                                                                                                                                                                            |
| Responding Agency Personnel # Of Fatalities : | 0                                                                                                                                                                            |
| Resp Agency Personnel # Of Decontaminated :   | Not reported                                                                                                                                                                 |
| Others Number Of Decontaminated :             | Not reported                                                                                                                                                                 |
| Others Number Of Injuries :                   | Not reported                                                                                                                                                                 |
| Others Number Of Fatalities :                 | Not reported                                                                                                                                                                 |
| Vehicle Make/year :                           | Not reported                                                                                                                                                                 |
| Vehicle License Number :                      | Not reported                                                                                                                                                                 |
| Vehicle State :                               | Not reported                                                                                                                                                                 |
| Vehicle Id Number :                           | Not reported                                                                                                                                                                 |
| CA/DOT/PUC/ICC Number :                       | Not reported                                                                                                                                                                 |
| Company Name :                                | Not reported                                                                                                                                                                 |
| Reporting Officer Name/ID :                   | Not reported                                                                                                                                                                 |
| Report Date :                                 | Not reported                                                                                                                                                                 |
| Comments :                                    | Not reported                                                                                                                                                                 |
| Facility Telephone Number :                   | Not reported                                                                                                                                                                 |
| Waterway Involved :                           | No                                                                                                                                                                           |
| Waterway :                                    | Not reported                                                                                                                                                                 |
| Spill Site :                                  | Other                                                                                                                                                                        |
| Cleanup By :                                  | Responsible Party                                                                                                                                                            |
| Containment :                                 | Yes                                                                                                                                                                          |
| What Happened :                               | Pressure relief valve failed. System shut down. Substance contained within system. There is a possibly the sewage made it to the wineries ponds. They will check and advise. |
| Type :                                        | CHEMICAL                                                                                                                                                                     |
| Other :                                       | liquid/gas                                                                                                                                                                   |

| MAP FINDINGS   |                                                                                                                                                  |               |                                |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------------------|
| Map ID         | Site                                                                                                                                             | Database(s)   | EDR ID Number<br>EPA ID Number |
| Direction      |                                                                                                                                                  |               |                                |
| Distance       |                                                                                                                                                  |               |                                |
| Distance (ft.) |                                                                                                                                                  |               |                                |
| Elevation      |                                                                                                                                                  |               |                                |
| (Continued)    |                                                                                                                                                  |               | S105654932                     |
|                | Chemical 1 :                                                                                                                                     | Not Reported  |                                |
|                | Chemical 2 :                                                                                                                                     | Not Reported  |                                |
|                | Chemical 3 :                                                                                                                                     | Not Reported  |                                |
|                | Date/Time :                                                                                                                                      | 8/9/98        |                                |
|                | Evacuations :                                                                                                                                    | 0             |                                |
| A10            | 1000 PRATT AVE                                                                                                                                   | ERNS          | 98449690                       |
| SSW            | 1000 PRATT AVE                                                                                                                                   |               | N/A                            |
| 1/8-1/4        | ST. HELENA, CA 94574                                                                                                                             |               |                                |
| 776 ft.        |                                                                                                                                                  |               |                                |
|                | Site 10 of 12 in cluster A                                                                                                                       |               |                                |
| Relative:      | The ERNS database may contain additional details for this site.<br>Please click here or contact your EDR Account Executive for more information. |               |                                |
| Higher         |                                                                                                                                                  |               |                                |
| Actual:        |                                                                                                                                                  |               |                                |
| 261 ft.        |                                                                                                                                                  |               |                                |
| A11            | 1000 PRATT AVE                                                                                                                                   | ERNS          | 99619491                       |
| SSW            | 1000 PRATT AVE                                                                                                                                   |               | N/A                            |
| 1/8-1/4        | ST. HELENA, CA 94574                                                                                                                             |               |                                |
| 776 ft.        |                                                                                                                                                  |               |                                |
|                | Site 11 of 12 in cluster A                                                                                                                       |               |                                |
| Relative:      | The ERNS database may contain additional details for this site.<br>Please click here or contact your EDR Account Executive for more information. |               |                                |
| Higher         |                                                                                                                                                  |               |                                |
| Actual:        |                                                                                                                                                  |               |                                |
| 261 ft.        |                                                                                                                                                  |               |                                |
| A12            | 1000 PRATT AVE                                                                                                                                   | ERNS          | 91215345                       |
| SSW            | 1000 PRATT AVE                                                                                                                                   |               | N/A                            |
| 1/8-1/4        | SAINT HELENA, CA 94574                                                                                                                           |               |                                |
| 776 ft.        |                                                                                                                                                  |               |                                |
|                | Site 12 of 12 in cluster A                                                                                                                       |               |                                |
| Relative:      | The ERNS database may contain additional details for this site.<br>Please click here or contact your EDR Account Executive for more information. |               |                                |
| Higher         |                                                                                                                                                  |               |                                |
| Actual:        |                                                                                                                                                  |               |                                |
| 261 ft.        |                                                                                                                                                  |               |                                |
| 13             |                                                                                                                                                  | CHMIRS        | S100277438                     |
| SW             | 1000 PRATTE AVENUE                                                                                                                               |               | N/A                            |
| 1/8-1/4        | ST. HELENA, CA 94574                                                                                                                             |               |                                |
| 1134 ft.       |                                                                                                                                                  |               |                                |
| Relative:      | CHMIRS:                                                                                                                                          |               |                                |
| Higher         | OES Control Number:                                                                                                                              | 9116262       |                                |
|                | Chemical Name:                                                                                                                                   | Not reported  |                                |
|                | Extent of Release:                                                                                                                               | Not reported  |                                |
| Actual:        | Property Use:                                                                                                                                    | Manufacturing |                                |
| 269 ft.        | Incident Date:                                                                                                                                   | 03-APR-91     |                                |
|                | Date Completed:                                                                                                                                  | 03-APR-91     |                                |
|                | Time Completed :                                                                                                                                 | 2340          |                                |
|                | Agency Id Number :                                                                                                                               | 28724         |                                |
|                | Agency Incident Number :                                                                                                                         | HF 161        |                                |
|                | OES Incident Number :                                                                                                                            | 9116262       |                                |
|                | Time Notified :                                                                                                                                  | 2250          |                                |
|                | Surrounding Area :                                                                                                                               | 500           |                                |
|                | Estimated Temperature :                                                                                                                          | 50            |                                |
|                | Property Management :                                                                                                                            | P             |                                |
|                | More Than Two Substances Involved? :                                                                                                             | N             |                                |
|                | Special Studies 1 :                                                                                                                              | Not reported  |                                |
|                | Special Studies 2 :                                                                                                                              | Not reported  |                                |

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

(Continued)

S100277438

Special Studies 3 : Not reported  
Special Studies 4 : Not reported  
Special Studies 5 : Not reported  
Special Studies 6 : Not reported  
Responding Agency Personnel # Of Injuries : 0  
Responding Agency Personnel # Of Fatalities : 0  
Resp Agency Personnel # Of Decontaminated : 0  
Others Number Of Decontaminated : 0  
Others Number Of Injuries : 0  
Others Number Of Fatalities : 0  
Vehicle Make/year : Not reported  
Vehicle License Number : Not reported  
Vehicle State : Not reported  
Vehicle Id Number : Not reported  
CA/DOT/PUC/ICC Number : Not reported  
Company Name : Not reported  
Reporting Officer Name/ID : JAQUELINE BERTAINA  
Report Date : 04-APR-91  
Comments : Yes  
Facility Telephone Number : 707 253-4269  
Waterway Involved : Not reported  
Waterway : Not reported  
Spill Site : Not reported  
Cleanup By : Not reported  
Containment : Not reported  
What Happened : Not reported  
Type : Not reported  
Other : Not reported  
Chemical 1 : Not Reported  
Chemical 2 : Not Reported  
Chemical 3 : Not Reported  
Date/Time : Not reported  
Evacuations : Not reported

14  
SW  
1/4-1/2  
1646 ft.  
BERINGER VINEYARDS  
2000 MAIN ST  
ST HELENA, CA 94574

UST U003114822  
LUST N/A  
Cortese

Relative: State LUST:  
Higher  
Actual: Cross Street: Not reported  
278 ft. Qty Leaked: Not reported  
Case Number 28-0019  
Reg Board: 2  
Chemical: Misc. Motor Vehicle Fuels  
Lead Agency: Regional Board  
Local Agency : 0  
Case Type: Undefined  
Status: Case Closed  
Abate Method: No Action Taken - no action has as yet been taken at the site  
Review Date: 02/02/1996 Confirm Leak: 02/02/1996  
Workplan: Not reported Prelim Assess: Not reported  
Pollution Char: Not reported Remed Plan: Not reported  
Remed Action: Not reported  
Monitoring: Not reported  
Close Date: 06/27/1997  
Release Date: 08/23/1989  
Cleanup Fund Id : Not reported  
Discover Date : 08/23/1989

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

BERINGER VINEYARDS \ (Continued)

U003114822

Enforcement Dt : Not reported  
Enf Type: Not reported  
Enter Date : 09/14/1989  
Funding: Federal Funds  
Staff Initials: ZZZ  
How Discovered: Tank Closure  
How Stopped: Not reported  
Interim : No  
Leak Cause: Structure Failure  
Leak Source: Tank  
MTBE Date : / /  
Max MTBE GW : 0 Parts per Billion  
MTBE Tested: Not Required to be Tested.  
Priority: Not reported  
Local Case # : 28-0019  
Beneficial: Not reported  
Staff : MRC  
GW Qualifier : Not reported  
Max MTBE Soil : Not reported  
Soil Qualifier : Not reported  
Hydr Basin #: Not reported  
Operator : Not reported  
Oversight Prgm: RB Lead Underground Storage Tank  
Oversight Prgm : UST  
Review Date : 07/29/1997  
Stop Date : 08/23/1989  
Work Suspended : No  
Responsible Party: BLANK RP  
RP Address: Not reported  
Global Id: T0605500018  
Org Name: Not reported  
Contact Person: Not reported  
MTBE Conc: 0  
Mtbe Fuel: 0  
Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported

LUST Region 2:

Region: 2  
Case Number: T0605500018  
Facility Id: 28-0019  
Entered Date: 09/14/1989  
Facility Status: Case Closed  
Maximum Soil Concentration: 0  
Maximum Groundwater Impact: 0  
County : Napa  
Current Benzene: Not reported  
MTBE Detected in GW: Not reported  
MTBE Detected in Soil: Not reported  
MTBE: 0  
MTBE Qualify: Not reported

CORTESE:

Region: CORTESE  
Fac Address 2: 2000 MAIN ST

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

BERINGER VINEYARDS (Continued)

EDR ID Number  
EPA ID Number

U003114822

UST Napa County:  
Facility ID: NAPA0020 Num of Tanks: 0  
Region: NAPA

B15 ABRUZZINI PROPERTY  
SSE 1030 FULTON LN  
1/4-1/2 ST HELENA, CA  
2007 ft.

LUST S104162284  
Cortese N/A

Site 1 of 6 in cluster B

Relative:  
Higher

Actual:  
255 ft.

State LUST:  
Cross Street: Not reported  
Qty Leaked: Not reported  
Case Number 28-0002  
Reg Board: 2  
Chemical: Gasoline  
Lead Agency: Local Agency  
Local Agency: 0  
Case Type: Soil only  
Status: Case Closed  
Abate Method: Excavate and Dispose - remove contaminated soil and dispose in approved site  
Review Date: Not reported  
Workplan: 8/8/90  
Pollution Char: Not reported  
Remed Action: Not reported  
Monitoring: Not reported  
Close Date: 05/15/1992  
Release Date: 04/02/1987  
Cleanup Fund Id: Not reported  
Discover Date: 04/02/1987  
Enforcement Dt: Not reported  
Enf Type: Not reported  
Enter Date: 04/02/1987  
Funding: Federal Funds  
Staff Initials: ZZZ  
How Discovered: Tank Closure  
How Stopped: Not reported  
Interim: Yes  
Leak Cause: Structure Failure  
Leak Source: Tank  
MTBE Date: / /  
Max MTBE GW: 0 Parts per Billion  
MTBE Tested: Site NOT Tested for MTBE. Includes Unknown and Not Analyzed.  
Priority: Not reported  
Local Case #: 18  
Beneficial: Not reported  
Staff: MRC  
GW Qualifier: Not reported  
Max MTBE Soil: Not reported  
Soil Qualifier: Not reported  
Hydr Basin #: Not reported  
Operator: Not reported  
Oversight Prgm: Local Oversight Program UST  
Oversight Prgm: LOP  
Review Date: 08/10/1990  
Stop Date: 04/02/1987  
Work Suspended: No

Confirm Leak: Not reported  
Prelim Assess: 8/8/90  
Remed Plan: Not reported

TC1089548.4s Page 16

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s)

EDR ID Number  
EPA ID Number

ABRUZZINI PROPERTY (Continued)

S104162284

Responsible Party: BLANK RP  
RP Address: Not reported  
Global Id: T0605500001  
Org Name: Not reported  
Contact Person: Not reported  
MTBE Conc: 0  
Mtbe Fuel: 1  
Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported

LUST Region 2:

Region: 2  
Case Number: T0605500001  
Facility Id: 28-0002  
Entered Date: 04/02/1987  
Facility Status: Case Closed  
Maximum Soil Concentration: 2885  
Maximum Groundwater Impact: 0  
County: Napa  
Current Benzene: Not reported  
MTBE Detected in GW: Not reported  
MTBE Detected in Soil: Not reported  
MTBE: 0  
MTBE Qualify: Not reported

CORTESE:

Region: CORTESE  
Fac Address 2: 1030 FULTON LN

B16 ABRUZZINI PROPERTY  
SSE 1030 FULTON LANE  
1/4-1/2 ST HELENA, CA 94574  
2007 ft.

LUST S105109539  
N/A

Site 2 of 6 in cluster B

Relative:  
Higher

LUST NAPA County:  
Facility ID: NAPA0018  
Region: NAPA  
Date Closed: 05/15/1992

Actual:  
255 ft.

B17 RON ABRUZZINI  
SSE 1030 FULTON LN  
1/4-1/2 ST HELENA, CA 94574  
2007 ft.

CA FID UST S101624086  
N/A

Site 3 of 6 in cluster B

Relative:  
Higher

Actual:  
255 ft.



Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

RON ABRUZZINI (Continued)

S101624086

|      |                                                    |                              |
|------|----------------------------------------------------|------------------------------|
| FID: | Facility ID: 28000007                              | Regulate ID: 00054371        |
|      | Reg By: Inactive Underground Storage Tank Location |                              |
|      | Cortese Code: Not reported                         | SIC Code: Not reported       |
|      | Status: Inactive                                   | Facility Tel: (707) 226-2674 |
|      | Mail To: Not reported                              |                              |
|      | 1222 RIVER PARK BLVD                               |                              |
|      | ST HELENA, CA 94574                                |                              |
|      | Contact: Not reported                              | Contact Tel: Not reported    |
|      | DUNs No: Not reported                              | NPDES No: Not reported       |
|      | Creation: 10/22/93                                 | Modified: 00/00/00           |
|      | EPA ID: Not reported                               |                              |
|      | Comments: Not reported                             |                              |

B18  
SSE  
1/4-1/2  
2007 ft.

ABRUZZINI PROPERTY  
1030 FULTON LANE  
ST HELENA, CA 94574

UST  
HIST UST  
U001598334  
N/A

Site 4 of 6 in cluster B

Relative:  
Higher

|           |                                      |                               |
|-----------|--------------------------------------|-------------------------------|
| UST HIST: | Facility ID: 54371                   | Facility Status: Not reported |
|           | Total Tanks: 2                       | Region: STATE                 |
|           | Owner Name: RON ABRUZZINI            | Box Number: Not reported      |
|           | Owner Address: 1222 RIVER PARK BLVD. |                               |
|           | NAPA, CA 94559                       |                               |

Actual:  
255 ft.

|                       |                 |
|-----------------------|-----------------|
| UST Napa County:      | Num of Tanks: 0 |
| Facility ID: NAPA0018 |                 |
| Region: NAPA          |                 |

B19  
SSE  
1/4-1/2  
2138 ft.

HELEN PASCHICH ESTATE  
1078 FULTON LANE  
ST HELENA, CA 94574

UST  
LUST  
Cortese  
HIST UST  
U001596441  
N/A

Site 5 of 6 in cluster B

Relative:  
Higher

|             |                                                                                                            |                             |
|-------------|------------------------------------------------------------------------------------------------------------|-----------------------------|
| State LUST: | Cross Street: Not reported                                                                                 | Confirm Leak: Not reported  |
|             | Qty Leaked: Not reported                                                                                   | Prelim Assess: Not reported |
|             | Case Number 28-0134                                                                                        | Remed Plan: Not reported    |
|             | Reg Board: 2                                                                                               |                             |
|             | Chemical: Misc. Motor Vehicle Fuels                                                                        |                             |
|             | Lead Agency: Local Agency                                                                                  |                             |
|             | Local Agency: 0                                                                                            |                             |
|             | Case Type: Soil only                                                                                       |                             |
|             | Status: Case Closed                                                                                        |                             |
|             | Abate Method: Excavate and Treat - remove contaminated soil and treat (includes spreading or land farming) |                             |
|             | Review Date: Not reported                                                                                  |                             |
|             | Workplan: Not reported                                                                                     |                             |
|             | Pollution Char: Not reported                                                                               |                             |
|             | Remed Action: Not reported                                                                                 |                             |
|             | Monitoring: Not reported                                                                                   |                             |
|             | Close Date: 12/10/1992                                                                                     |                             |
|             | Release Date: 04/09/1990                                                                                   |                             |
|             | Cleanup Fund Id: Not reported                                                                              |                             |
|             | Discover Date: 08/23/1989                                                                                  |                             |

Actual:  
258 ft.

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

HELEN PASCHICH ESTATE (Continued)

U001596441

Enforcement Dt : Not reported  
Enf Type: Not reported  
Enter Date : 09/14/1989  
Funding: Federal Funds  
Staff Initials: ZZZ  
How Discovered: Tank Closure  
How Stopped: Not reported  
Interim : Yes  
Leak Cause: Structure Failure  
Leak Source: Tank  
MTBE Date : / /  
Max MTBE GW : 0 Parts per Billion  
MTBE Tested: Not Required to be Tested.  
Priority: Not reported  
Local Case # : 200  
Beneficial: Not reported  
Staff : MRC  
GW Qualifier : Not reported  
Max MTBE Soil : Not reported  
Soil Qualifier : Not reported  
Hydr Basin #: Not reported  
Operator : Not reported  
Oversight Prgm: Local Oversight Program UST  
Oversight Prgm : LOP  
Review Date : 03/04/1993  
Stop Date : 08/23/1989  
Work Suspended :No  
Responsible Party:BLANK RP  
RP Address: Not reported  
Global Id: T0605500123  
Org Name: Not reported  
Contact Person: Not reported  
MTBE Conc: 0  
Mtbe Fuel: 0  
Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported

LUST Region 2:

Region: 2  
Case Number: T0605500123  
Facility Id: 28-0134  
Entered Date: 09/14/1989  
Facility Status: Case Closed  
Maximum Soil Concentration: 5  
Maximum Groundwater Impact: 0  
County : Napa  
Current Benzene: Not reported  
MTBE Detected in GW: Not reported  
MTBE Detected in Soil: Not reported  
MTBE: 0  
MTBE Qualify: Not reported

LUST NAPA County:

Facility ID: NAPA0200  
Region: NAPA

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

## MAP FINDINGS

## HELEN PASCHICH ESTATE (Continued)

EDR ID Number  
EPA ID Number

U001596441

Date Closed: 12/10/1992

## CORTESE:

Region: CORTESE  
Fac Address 2: 1078 FULTON LN

## UST HIST:

Facility ID: 48591 Facility Status: Not reported  
Total Tanks: 1 Region: STATE  
Owner Name: L.J. PASCHICH Box Number: Not reported  
Owner Address: 2130 PICKETT RD.  
CALISTOGA, CA 94515

## UST Napa County:

Facility ID: NAPA0200 Num of Tanks: 0  
Region: NAPA

B20 NICHOLLS, FREEMAN  
SSE 1080 FULTON LN  
1/4-1/2 ST HELENA, CA 94574  
2144 ft.

UST U003114688  
N/A

## Site 6 of 6 in cluster B

Relative:  
Higher

UST Napa County:  
Facility ID: NAPA0590 Num of Tanks: 0  
Region: NAPA

Actual:  
259 ft.

C21 ST HELENA POLICE DEPARTMENT  
SSE 1480 MAIN ST  
1/2-1 ST HELENA, CA 94574  
2854 ft.

LUST S102438003  
Cortese N/A

## Site 1 of 2 in cluster C

Relative:  
Higher

State LUST:  
Cross Street: Not reported  
Qty Leaked: Not reported  
Case Number: 28-0210  
Reg Board: 2  
Chemical: Diesel  
Lead Agency: Local Agency  
Local Agency: 0  
Case Type: Undefined  
Status: Leak being confirmed  
Abate Method: No Action Taken - no action has as yet been taken at the site  
Review Date: 08/20/1996 Confirm Leak: 08/20/1996  
Workplan: Not reported Prelim Assess: Not reported  
Pollution Char: Not reported Remed Plan: Not reported  
Remed Action: Not reported  
Monitoring: Not reported  
Close Date: Not reported  
Release Date: 05/20/1991  
Cleanup Fund Id: Not reported  
Discover Date: 06/07/1991  
Enforcement Dt: Not reported  
Enf Type: Not reported  
Enter Date: 12/29/1992  
Funding: Federal Funds  
Staff Initials: JMC  
How Discovered: Tank Closure  
How Stopped: Not reported

Actual:  
258 ft.

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s)

EDR ID Number  
EPA ID Number

ST HELENA POLICE DEPARTMENT \ (Continued)

S102438003

Interim : No  
Leak Cause: Structure Failure  
Leak Source: Tank  
MTBE Date : / /  
Max MTBE GW : 0 Parts per Billion  
MTBE Tested: Not Required to be Tested.  
Priority: Not reported  
Local Case # : 398  
Beneficial: Not reported  
Staff : MRC  
GW Qualifier : Not reported  
Max MTBE Soil : Not reported  
Soil Qualifier : Not reported  
Hydr Basin # : Not reported  
Operator : Not reported  
Oversight Prgm: Local Oversight Program UST  
Oversight Prgm : LOP  
Review Date : 08/20/1996  
Stop Date : 06/07/1991  
Work Suspended : No  
Responsible Party: BLANK RP  
RP Address: Not reported  
Global Id: T0605500189  
Org Name: Not reported  
Contact Person: Not reported  
MTBE Conc: 0  
Mtbe Fuel: 0  
Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported

LUST Region 2:

Region: 2  
Case Number: T0605500189  
Facility Id: 28-0210  
Entered Date: 12/29/1992  
Facility Status: Leak being confirmed  
Maximum Soil Concentration: 0  
Maximum Groundwater Impact: 0  
County : Napa  
Current Benzene: Not reported  
MTBE Detected in GW: Not reported  
MTBE Detected in Soil: Not reported  
MTBE: 0  
MTBE Qualify: Not reported

CORTESE:

Region: CORTESE  
Fac Address 2: Not reported

| Map ID              | MAP FINDINGS                                                                                                |                |              |            |               |
|---------------------|-------------------------------------------------------------------------------------------------------------|----------------|--------------|------------|---------------|
| Direction           |                                                                                                             |                |              |            |               |
| Distance            |                                                                                                             |                |              |            |               |
| Distance (ft.)      |                                                                                                             |                |              |            | EDR ID Number |
| Elevation           | Site                                                                                                        |                | Database(s)  |            | EPA ID Number |
| C22                 | ST. HELENA CITY POLICE DEPARTM                                                                              |                | UST          | U003114820 |               |
| SSE                 | 1480 MAIN ST                                                                                                |                | LUST         | N/A        |               |
| 1/2-1               | SAINT HELENA, CA 94574                                                                                      |                |              |            |               |
| 2854 ft.            |                                                                                                             |                |              |            |               |
|                     | Site 2 of 2 in cluster C                                                                                    |                |              |            |               |
| Relative:<br>Higher | LUST NAPA County:                                                                                           |                |              |            |               |
|                     | Facility ID: NAPA0398                                                                                       |                |              |            |               |
| Actual:             | Region: NAPA                                                                                                |                |              |            |               |
| 258 ft.             | Date Closed: / /                                                                                            |                |              |            |               |
|                     | UST Napa County:                                                                                            |                |              |            |               |
|                     | Facility ID: NAPA0398                                                                                       | Num of Tanks:  | 0            |            |               |
|                     | Region: NAPA                                                                                                |                |              |            |               |
| 23                  | GIN PROPERTY                                                                                                |                | LUST         | S101299178 |               |
| NNE                 | 3473 ST HELENA HWY                                                                                          |                |              | N/A        |               |
| 1/2-1               | ST HELENA, CA 94574                                                                                         |                |              |            |               |
| 2939 ft.            |                                                                                                             |                |              |            |               |
| Relative:<br>Higher | State LUST:                                                                                                 |                |              |            |               |
|                     | Cross Street: Not reported                                                                                  |                |              |            |               |
|                     | Qty Leaked: Not reported                                                                                    |                |              |            |               |
| Actual:             | Case Number 28-0226                                                                                         |                |              |            |               |
| 342 ft.             | Reg Board: 2                                                                                                |                |              |            |               |
|                     | Chemical: Gasoline                                                                                          |                |              |            |               |
|                     | Lead Agency: Regional Board                                                                                 |                |              |            |               |
|                     | Local Agency : 0                                                                                            |                |              |            |               |
|                     | Case Type: Soil only                                                                                        |                |              |            |               |
|                     | Status: Leak being confirmed                                                                                |                |              |            |               |
|                     | Abate Method: Excavate and Treat - remove contaminated soil and treat \includes spreading or land farming\) |                |              |            |               |
|                     | Review Date: 03/26/1993                                                                                     | Confirm Leak:  | 03/26/1993   |            |               |
|                     | Workplan: Not reported                                                                                      | Prelim Assess: | Not reported |            |               |
|                     | Pollution Char: Not reported                                                                                | Remed Plan:    | Not reported |            |               |
|                     | Remed Action: Not reported                                                                                  |                |              |            |               |
|                     | Monitoring: Not reported                                                                                    |                |              |            |               |
|                     | Close Date: Not reported                                                                                    |                |              |            |               |
|                     | Release Date: 03/22/1993                                                                                    |                |              |            |               |
|                     | Cleanup Fund Id : Not reported                                                                              |                |              |            |               |
|                     | Discover Date : 02/16/1993                                                                                  |                |              |            |               |
|                     | Enforcement Dt : Not reported                                                                               |                |              |            |               |
|                     | Enf Type: DLLET                                                                                             |                |              |            |               |
|                     | Enter Date : 03/25/1993                                                                                     |                |              |            |               |
|                     | Funding: Federal Funds                                                                                      |                |              |            |               |
|                     | Staff Initials: ZZZ                                                                                         |                |              |            |               |
|                     | How Discovered: Tank Closure                                                                                |                |              |            |               |
|                     | How Stopped: Not reported                                                                                   |                |              |            |               |
|                     | Interim : Yes                                                                                               |                |              |            |               |
|                     | Leak Cause: Structure Failure                                                                               |                |              |            |               |
|                     | Leak Source: Tank                                                                                           |                |              |            |               |
|                     | MTBE Date : / /                                                                                             |                |              |            |               |
|                     | Max MTBE GW : 0 Parts per Billion                                                                           |                |              |            |               |
|                     | MTBE Tested: Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.                                    |                |              |            |               |
|                     | Priority: Not reported                                                                                      |                |              |            |               |
|                     | Local Case # : 28-0226                                                                                      |                |              |            |               |
|                     | Beneficial: Not reported                                                                                    |                |              |            |               |
|                     | Staff : MRC                                                                                                 |                |              |            |               |
|                     | GW Qualifier : Not reported                                                                                 |                |              |            |               |
|                     | Max MTBE Soil : Not reported                                                                                |                |              |            |               |
|                     | Soil Qualifier : Not reported                                                                               |                |              |            |               |

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

GIN PROPERTY \Continued\

S101299178

Hydr Basin #: Not reported  
Operator : Not reported  
Oversight Prgm: RB Lead Underground Storage Tank  
Oversight Prgm : UST  
Review Date : 07/11/2001  
Stop Date : 02/16/1993  
Work Suspended :No  
Responsible Party:BLANK RP  
RP Address: Not reported  
Global Id: T0605591140  
Org Name: Not reported  
Contact Person: Not reported  
MTBE Conc: 0  
Mtbe Fuel: 1  
Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported

LUST Region 2:

Region: 2  
Case Number: T0605591140  
Facility Id: 28-0226  
Entered Date: 03/25/1993  
Facility Status: Leak being confirmed  
Maximum Soil Concentration: 170  
Maximum Groundwater Impact: 0  
County : Napa  
Current Benzene: Not reported  
MTBE Detected in GW: Not reported  
MTBE Detected in Soil: Not reported  
MTBE: 0  
MTBE Qualify: Not reported

24  
South  
1/2-1  
3103 ft.

JAEGER PROPERTY  
1665 SPRING MOUNTAIN RD  
ST HELENA, CA 94574

LUST S104165861  
Cortese N/A

Relative:  
Higher

Actual:  
284 ft.

State LUST:

Cross Street: Not reported  
Qty Leaked: Not reported  
Case Number 28-0079  
Reg Board: 2  
Chemical: Unleaded Gasoline  
Lead Agency: Regional Board  
Local Agency : 0  
Case Type: Undefined  
Status: Case Closed  
Abate Method: No Action Taken - no action has as yet been taken at the site  
Review Date: Not reported  
Workplan: Not reported  
Pollution Char: Not reported  
Remed Action: Not reported  
Monitoring: Not reported  
Close Date: 10/06/1995  
Release Date: 03/23/1989  
Cleanup Fund Id : Not reported

Confirm Leak: Not reported  
Prelim Assess: Not reported  
Remed Plan: Not reported

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

JAEGER PROPERTY (Continued)

S104165861

Discover Date : 03/23/1989  
Enforcement Dt : Not reported  
Enf Type: Not reported  
Enter Date : 08/08/1989  
Funding: Federal Funds  
Staff Initials: ZZZ  
How Discovered: Tank Closure  
How Stopped: Not reported  
Interim : No  
Leak Cause: Structure Failure  
Leak Source: Tank  
MTBE Date : / /  
Max MTBE GW : 0 Parts per Billion  
MTBE Tested: Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.  
Priority: Not reported  
Local Case # : 28-0079  
Beneficial: Not reported  
Staff : MRC  
GW Qualifier : Not reported  
Max MTBE Soil : Not reported  
Soil Qualifier : Not reported  
Hydr Basin #: Not reported  
Operator : Not reported  
Oversight Prgm: RB Lead Underground Storage Tank  
Oversight Prgm : UST  
Review Date : 10/06/1995  
Stop Date : 03/23/1989  
Work Suspended :No  
Responsible Party:BLANK RP  
RP Address: Not reported  
Global Id: T0605500072  
Org Name: Not reported  
Contact Person: Not reported  
MTBE Conc: 0  
Mibe Fuel: 1  
Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported

LUST Region 2:

Region: 2  
Case Number: T0605500072  
Facility Id: 28-0079  
Entered Date: 08/08/1989  
Facility Status: Case Closed  
Maximum Soil Concentration: 0  
Maximum Groundwater Impact: 0  
County : Napa  
Current Benzene: Not reported  
MTBE Detected in GW: Not reported  
MTBE Detected in Soli: Not reported  
MTBE: 0  
MTBE Qualify: Not reported

CORTESE:

Region: CORTESE



| Map ID    | Direction                      | Distance                                                      | Distance (ft.) | Elevation | Site                        | Database(s)             | EDR ID Number | EPA ID Number |
|-----------|--------------------------------|---------------------------------------------------------------|----------------|-----------|-----------------------------|-------------------------|---------------|---------------|
|           |                                |                                                               |                |           | MAP FINDINGS                |                         |               |               |
|           |                                |                                                               |                |           | JAEGER PROPERTY (Continued) |                         | S104165861    |               |
|           |                                |                                                               |                |           | Fac Address 2:              | 1665 SPRING MOUNTAIN RD |               |               |
| D25       | ST. HELENA CHEVRON STATION #90 |                                                               |                |           |                             | UST                     | U003114818    |               |
| SSE       | 1400 MAIN ST                   |                                                               |                |           |                             | LUST                    | N/A           |               |
| 1/2-1     | SAINT HELENA, CA 94574         |                                                               |                |           |                             |                         |               |               |
| 3258 ft.  |                                |                                                               |                |           |                             |                         |               |               |
|           |                                |                                                               |                |           | Site 1 of 5 in cluster D    |                         |               |               |
| Relative: | LUST NAPA County:              |                                                               |                |           |                             |                         |               |               |
| Higher    | Facility ID:                   | NAPA0255                                                      |                |           |                             |                         |               |               |
|           | Region:                        | NAPA                                                          |                |           |                             |                         |               |               |
| Actual:   | Date Closed:                   | / /                                                           |                |           |                             |                         |               |               |
| 253 ft.   |                                |                                                               |                |           |                             |                         |               |               |
|           |                                |                                                               |                |           | State UST:                  |                         |               |               |
|           | Facility ID:                   | NAPA0255                                                      |                |           |                             |                         |               |               |
|           | Region:                        | STATE                                                         |                |           |                             |                         |               |               |
|           | Local Agency:                  | 28000                                                         |                |           |                             |                         |               |               |
|           |                                |                                                               |                |           | UST Napa County:            |                         |               |               |
|           | Facility ID:                   | NAPA0255                                                      |                |           | Num of Tanks:               | 2                       |               |               |
|           | Region:                        | NAPA                                                          |                |           |                             |                         |               |               |
| D26       | CHEVRON                        |                                                               |                |           |                             | LUST                    | S105030297    |               |
| SSE       | 1400 MAIN ST                   |                                                               |                |           |                             | Cortese                 | N/A           |               |
| 1/2-1     | ST HELENA, CA                  |                                                               |                |           |                             |                         |               |               |
| 3312 ft.  |                                |                                                               |                |           |                             |                         |               |               |
|           |                                |                                                               |                |           | Site 2 of 5 in cluster D    |                         |               |               |
| Relative: | State LUST:                    |                                                               |                |           |                             |                         |               |               |
| Higher    | Cross Street:                  | Adams Street                                                  |                |           |                             |                         |               |               |
|           | Qty Leaked:                    | Not reported                                                  |                |           |                             |                         |               |               |
| Actual:   | Case Number                    | 28-0211                                                       |                |           |                             |                         |               |               |
| 254 ft.   | Reg Board:                     | 2                                                             |                |           |                             |                         |               |               |
|           | Chemical:                      | Waste Oil                                                     |                |           |                             |                         |               |               |
|           | Lead Agency:                   | Local Agency                                                  |                |           |                             |                         |               |               |
|           | Local Agency :                 | 0                                                             |                |           |                             |                         |               |               |
|           | Case Type:                     | Other ground water affected                                   |                |           |                             |                         |               |               |
|           | Status:                        | No Action                                                     |                |           |                             |                         |               |               |
|           | Abate Method:                  | No Action Taken - no action has as yet been taken at the site |                |           |                             |                         |               |               |
|           | Review Date:                   | Not reported                                                  |                |           | Confirm Leak:               | Not reported            |               |               |
|           | Workplan:                      | 5/15/92                                                       |                |           | Prelim Assess:              | 5/15/92                 |               |               |
|           | Pollution Char:                | Not reported                                                  |                |           | Remed Plan:                 | Not reported            |               |               |
|           | Remed Action:                  | Not reported                                                  |                |           |                             |                         |               |               |
|           | Monitoring:                    | Not reported                                                  |                |           |                             |                         |               |               |
|           | Close Date:                    | Not reported                                                  |                |           |                             |                         |               |               |
|           | Release Date:                  | 09/03/1991                                                    |                |           |                             |                         |               |               |
|           | Cleanup Fund Id :              | Not reported                                                  |                |           |                             |                         |               |               |
|           | Discover Date :                | 03/15/1997                                                    |                |           |                             |                         |               |               |
|           | Enforcement Dt :               | Not reported                                                  |                |           |                             |                         |               |               |
|           | Enf Type:                      | Not reported                                                  |                |           |                             |                         |               |               |
|           | Enter Date :                   | 10/21/1991                                                    |                |           |                             |                         |               |               |
|           | Funding:                       | Federal Funds                                                 |                |           |                             |                         |               |               |
|           | Staff Initials:                | JMC                                                           |                |           |                             |                         |               |               |
|           | How Discovered:                | Tank Closure                                                  |                |           |                             |                         |               |               |
|           | How Stopped:                   | Not reported                                                  |                |           |                             |                         |               |               |
|           | Interim :                      | No                                                            |                |           |                             |                         |               |               |
|           | Leak Cause:                    | Structure Failure                                             |                |           |                             |                         |               |               |
|           | Leak Source:                   | Tank                                                          |                |           |                             |                         |               |               |
|           | MTBE Date :                    | 09/10/2002                                                    |                |           |                             |                         |               |               |

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

CHEVRON \ (Continued)

S105030297

Max MTBE GW : 6 Parts per Billion  
MTBE Tested: MTBE Detected. Site tested for MTBE & MTBE detected  
Priority: Not reported  
Local Case # : 255  
Beneficial: AGR, GWR, MUN, WILD  
Staff : MRC  
GW Qualifier : =  
Max MTBE Soil : 15 Parts per Million  
Soil Qualifier : Not reported  
Hydr Basin #: Not reported  
Operator : Not reported  
Oversight Prgm: Local Oversight Program UST  
Oversight Prgm : LOP  
Review Date : 07/25/2002  
Stop Date : 08/23/1991  
Work Suspended No  
Responsible Party BLANK RP  
RP Address: Not reported  
Global Id: T0605500190  
Org Name: Not reported  
Contact Person: Not reported  
MTBE Conc: 7  
Mtbe Fuel: 0  
Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported

LUST Region 2:

Region: 2  
Case Number: T0605500190  
Facility Id: 28-0211  
Entered Date: 10/21/1991  
Facility Status: Preliminary site assessment underway  
Maximum Soil Concentration: 160  
Maximum Groundwater Impact: 63000  
County : Napa  
Current Benzene: 10  
MTBE Detected in GW: 850  
MTBE Detected in Soil: 15  
MTBE: 240  
MTBE Qualify: =

CORTESE:

Region: CORTESE  
Fac Address 2: 1400 MAIN ST

Region: CORTESE  
Fac Address 2: 1400 MAIN ST

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation |                                                               | MAP FINDINGS                                                  |                  | Database(s)             | EDR ID Number<br>EPA ID Number |
|----------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|------------------|-------------------------|--------------------------------|
| D27<br>SSE<br>1/2-1<br>3350 ft.                                | MAIN STREET SERVICE<br>1380 MAIN ST<br>SAINT HELENA, CA 94574 |                                                               |                  | UST<br>LUST<br>HIST UST | U001598343<br>N/A              |
| Site 3 of 5 in cluster D                                       |                                                               |                                                               |                  |                         |                                |
| Relative:<br>Higher                                            | LUST Napa County:                                             |                                                               |                  |                         |                                |
|                                                                | Facility ID:                                                  | NAPA0199                                                      |                  |                         |                                |
| Actual:<br>252 ft.                                             | Region:                                                       | NAPA                                                          |                  |                         |                                |
|                                                                | Date Closed:                                                  | / /                                                           |                  |                         |                                |
|                                                                | UST HIST:                                                     |                                                               |                  |                         |                                |
|                                                                | Facility ID:                                                  | 52024                                                         | Facility Status: | Not reported            |                                |
|                                                                | Total Tanks:                                                  | 5                                                             | Region:          | STATE                   |                                |
|                                                                | Owner Name:                                                   | PATRICK D SCOTT                                               | Box Number:      | Not reported            |                                |
|                                                                | Owner Address:                                                | 90 DAHLIA ST<br>ST. HELENA, CA 94574                          |                  |                         |                                |
|                                                                | UST Napa County:                                              |                                                               |                  |                         |                                |
|                                                                | Facility ID:                                                  | NAPA0199                                                      | Num of Tanks:    | 0                       |                                |
|                                                                | Region:                                                       | NAPA                                                          |                  |                         |                                |
| D28<br>SSE<br>1/2-1<br>3350 ft.                                | UNION 76<br>1380 MAIN ST<br>ST HELENA, CA 94574               |                                                               |                  | LUST<br>Cortese         | S102439588<br>N/A              |
| Site 4 of 5 in cluster D                                       |                                                               |                                                               |                  |                         |                                |
| Relative:<br>Higher                                            | State LUST:                                                   |                                                               |                  |                         |                                |
|                                                                | Cross Street:                                                 | Adams Street                                                  |                  |                         |                                |
|                                                                | Qty Leaked:                                                   | Not reported                                                  |                  |                         |                                |
| Actual:<br>252 ft.                                             | Case Number                                                   | 28-0175                                                       |                  |                         |                                |
|                                                                | Reg Board:                                                    | 2                                                             |                  |                         |                                |
|                                                                | Chemical:                                                     | 0                                                             |                  |                         |                                |
|                                                                | Lead Agency:                                                  | Local Agency                                                  |                  |                         |                                |
|                                                                | Local Agency :                                                | 0                                                             |                  |                         |                                |
|                                                                | Case Type:                                                    | Other ground water affected                                   |                  |                         |                                |
|                                                                | Status:                                                       | Post remedial action monitoring                               |                  |                         |                                |
|                                                                | Abate Method:                                                 | No Action Taken - no action has as yet been taken at the site |                  |                         |                                |
|                                                                | Review Date:                                                  | 04/10/1989                                                    | Confirm Leak:    | 04/10/1989              |                                |
|                                                                | Workplan:                                                     | Not reported                                                  | Prelim Assess:   | Not reported            |                                |
|                                                                | Pollution Char:                                               | Not reported                                                  | Remed Plan:      | Not reported            |                                |
|                                                                | Remed Action:                                                 | Not reported                                                  |                  |                         |                                |
|                                                                | Monitoring:                                                   | 5/9/00                                                        |                  |                         |                                |
|                                                                | Close Date:                                                   | Not reported                                                  |                  |                         |                                |
|                                                                | Release Date:                                                 | 05/08/1989                                                    |                  |                         |                                |
|                                                                | Cleanup Fund Id :                                             | Not reported                                                  |                  |                         |                                |
|                                                                | Discover Date :                                               | 03/22/1989                                                    |                  |                         |                                |
|                                                                | Enforcement Dt :                                              | Not reported                                                  |                  |                         |                                |
|                                                                | Enf Type:                                                     | Not reported                                                  |                  |                         |                                |
|                                                                | Enter Date :                                                  | 07/27/1989                                                    |                  |                         |                                |
|                                                                | Funding:                                                      | Federal Funds                                                 |                  |                         |                                |
|                                                                | Staff Initials:                                               | JMC                                                           |                  |                         |                                |
|                                                                | How Discovered:                                               | Tank Closure                                                  |                  |                         |                                |
|                                                                | How Stopped:                                                  | Close Tank                                                    |                  |                         |                                |
|                                                                | Interim :                                                     | No                                                            |                  |                         |                                |
|                                                                | Leak Cause:                                                   | Structure Failure                                             |                  |                         |                                |
|                                                                | Leak Source:                                                  | Tank                                                          |                  |                         |                                |
|                                                                | MTBE Date :                                                   | 01/02/1965                                                    |                  |                         |                                |
|                                                                | Max MTBE GW :                                                 | 2600 Parts per Billion                                        |                  |                         |                                |
|                                                                | MTBE Tested:                                                  | MTBE Detected. Site tested for MTBE & MTBE detected           |                  |                         |                                |
|                                                                | Priority:                                                     | Not reported                                                  |                  |                         |                                |

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation Site

MAP FINDINGS

Database(s)

EDR ID Number  
EPA ID Number

UNION 76 (Continued)

S102439588

Local Case #: 199  
Beneficial: GWR, PROC, IND, MUN, SPWN, REC-1, WILD  
Staff: MRC  
GW Qualifier: Not reported  
Max MTBE Soil: Not reported  
Soil Qualifier: Not reported  
Hydr Basin #: Not reported  
Operator: Not reported  
Oversight Prgm: Local Oversight Program UST  
Oversight Prgm: LOP  
Review Date: 02/26/2003  
Stop Date: 05/17/1989  
Work Suspended: No  
Responsible Party: BLANK RP  
RP Address: Not reported  
Global Id: T0605500159  
Org Name: Not reported  
Contact Person: Not reported  
MTBE Conc: 1  
Mtbe Fuel: 0  
Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported  
  
Cross Street: ADAMS ST  
Qty Leaked: Not reported  
Case Number: 28-0295  
Reg Board: 2  
Chemical: Gasoline  
Lead Agency: Local Agency  
Local Agency: 0  
Case Type: Other ground water affected  
Status: Leak being confirmed  
Review Date: 12/14/1998  
Workplan: Not reported  
Pollution Char: Not reported  
Remed Action: Not reported  
Monitoring: Not reported  
Close Date: Not reported  
Release Date: 12/14/1998  
Cleanup Fund Id: Not reported  
Discover Date: 12/14/1998  
Enforcement Dt: Not reported  
Enf Type: Not reported  
Enter Date: 01/15/1999  
Funding: Not reported  
Staff Initials: JMB  
How Discovered: Tank Closure  
How Stopped: Not reported  
Interim: Not reported  
Leak Cause: UNK  
Leak Source: UNK  
MTBE Date: 01/02/1965  
Max MTBE GW: 26000 Parts per Billion  
MTBE Tested: MTBE Detected. Site tested for MTBE & MTBE detected

Confirm Leak: 12/14/1998  
Prelim Assess: Not reported  
Remed Plan: Not reported

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

Site

MAP FINDINGS

Database(s)

EDR ID Number  
EPA ID Number

UNION 76 (Continued)

S102439588

Priority: Not reported  
Local Case #: 280295  
Beneficial: Not reported  
Staff: MRC  
GW Qualifier: Not reported  
Max MTBE Soil: Not reported  
Soil Qualifier: Not reported  
Hydr Basin #: Not reported  
Operator: Not reported  
Oversight Prgm: Local Oversight Program UST  
Oversight Prgm: LOP  
Review Date: 04/09/1999  
Stop Date: 12/14/1998  
Work Suspended: No  
Responsible Party: BLANK RP  
RP Address: Not reported  
Global Id: T0605500251  
Org Name: Not reported  
Contact Person: Not reported  
MTBE Conc: 1  
Mtbe Fuel: 1  
Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported

LUST Region 2:

Region: 2  
Case Number: T0605500159  
Facility Id: 28-0175  
Entered Date: 07/27/1989  
Facility Status: Post remedial action monitoring  
Maximum Soil Concentration: 230  
Maximum Groundwater Impact: 2600  
County: Napa  
Current Benzene: Not reported  
MTBE Detected in GW: 2600  
MTBE Detected in Soil: Not reported  
MTBE: 2600  
MTBE Qualify: Not reported  
Region: 2  
Case Number: T0605500251  
Facility Id: 28-0295  
Entered Date: 01/15/1999  
Facility Status: Leak being confirmed  
Maximum Soil Concentration: 0  
Maximum Groundwater Impact: 26000  
County: Napa  
Current Benzene: Not reported  
MTBE Detected in GW: 26000  
MTBE Detected in Soil: Not reported  
MTBE: 26000  
MTBE Qualify: Not reported

CORTESE:

Region: CORTESE  
Fac Address 2: 1380 MAIN ST

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s)

EDR ID Number  
EPA ID Number

UNION 76 \ (Continued)

S102439588

Region: CORTESE  
Fac Address 2: 1380 MAIN ST

D29  
SSE  
1/2-1  
3482 ft.  
1354 MAIN ST.  
SAINT HELENA, CA 95401

CHMIRS S105883515  
N/A

Site 5 of 5 in cluster D

Relative:  
Higher

Actual:  
250 ft.

CHMIRS:

OES Control Number: 02-1785  
Chemical Name: Mineral Oil  
Extent of Release: Not reported  
Property Use: Not reported  
Incident Date: Not reported  
Date Completed: Not reported  
Time Completed: Not reported  
Agency Id Number: Not reported  
Agency Incident Number: Not reported  
OES Incident Number: 02-1785  
Time Notified: Not reported  
Surrounding Area: Not reported  
Estimated Temperature: Not reported  
Property Management: Not reported  
More Than Two Substances Involved?: Not reported  
Special Studies 1: Not reported  
Special Studies 2: Not reported  
Special Studies 3: Not reported  
Special Studies 4: Not reported  
Special Studies 5: Not reported  
Special Studies 6: Not reported  
Responding Agency Personnel # Of Injuries: 0  
Responding Agency Personnel # Of Fatalities: 0  
Resp Agency Personnel # Of Decontaminated: Not reported  
Others Number Of Decontaminated: Not reported  
Others Number Of Injuries: Not reported  
Others Number Of Fatalities: Not reported  
Vehicle Make/year: Not reported  
Vehicle License Number: Not reported  
Vehicle State: Not reported  
Vehicle Id Number: Not reported  
CA/DOT/PUC/ICC Number: Not reported  
Company Name: Not reported  
Reporting Officer Name/ID: Not reported  
Report Date: Not reported  
Comments: Not reported  
Facility Telephone Number: Not reported  
Waterway Involved: No  
Waterway: Not reported  
Spill Site: Road  
Cleanup By: Reporting Party  
Containment: Yes  
What Happened: A leak from transformer over a two day period.  
Type: Gal(s)  
Other: non pcb's  
Chemical 1: Not Reported  
Chemical 2: Not Reported  
Chemical 3: Not Reported

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

(Continued)

S105883515

Date/Time : 3/30/2002 1230  
Evacuations : 0

30 PACIFIC BELL  
SSE 1240 OAK STREET  
1/2-1 SAINT HELENA, CA 94574  
4070 ft.

RCRIS-SQG 1000251880  
FINDS CAT080029341  
LUST  
Cortese  
HAZNET

Relative:  
Lower

RCRIS:  
Owner: NOT REQUIRED  
(415) 555-1212  
EPA ID: CAT080029341  
Contact: Not reported  
Classification: Small Quantity Generator  
TSDF Activities: Not reported  
Violation Status: No violations found

Actual:  
244 ft.

FINDS:

Other Pertinent Environmental Activity Identified at Site:  
Facility Registry System (FRS)  
Resource Conservation and Recovery Act Information system (RCRAINFO)

State LUST:

Cross Street: Not reported  
Qty Leaked: Not reported  
Case Number: 28-0128  
Reg Board: 2  
Chemical: Diesel  
Lead Agency: Regional Board  
Local Agency: 0  
Case Type: Other ground water affected  
Status: Case Closed  
Abate Method: No Action Taken - no action has as yet been taken at the site  
Review Date: Not reported  
Workplan: Not reported  
Pollution Char: Not reported  
Remed Action: Not reported  
Monitoring: Not reported  
Close Date: 08/08/1996  
Release Date: 09/04/1986  
Cleanup Fund Id: Not reported  
Discover Date: 09/04/1986  
Enforcement Dt: Not reported  
Enf Type: Not reported  
Enter Date: 09/04/1986  
Funding: Federal Funds  
Staff Initials: ZZZ  
How Discovered: Tank Closure  
How Stopped: Not reported  
Interim: No  
Leak Cause: Structure Failure  
Leak Source: Tank  
MTBE Date: / /  
Max MTBE GW: 0 Parts per Billion  
MTBE Tested: Not Required to be Tested.  
Priority: Not reported

Confirm Leak: Not reported  
Prelim Assess: Not reported  
Remed Plan: Not reported



Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

PACIFIC BELL (Continued)

EDR ID Number  
EPA ID Number

Database(s)

1000251880

Local Case # : 54  
Beneficial: Not reported  
Staff : MRC  
GW Qualifier : Not reported  
Max MTBE Soil : Not reported  
Soil Qualifier : Not reported  
Hydr Basin # : Not reported  
Operator : Not reported  
Oversight Prgm: RB Lead Underground Storage Tank  
Oversight Prgm : UST  
Review Date : 10/29/1999  
Stop Date : 09/04/1986  
Work Suspended No  
Responsible Party BLANK RP  
RP Address: Not reported  
Global Id: T0605500117  
Org Name: Not reported  
Contact Person: Not reported  
MTBE Conc: 0  
Mtbe Fuel: 0  
Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported

LUST Region 2:

Region: 2  
Case Number: T0605500117  
Facility Id: 28-0128  
Entered Date: 09/04/1986  
Facility Status: Case Closed  
Maximum Soil Concentration: 0  
Maximum Groundwater Impact: 170  
County : Napa  
Current Benzene: Not reported  
MTBE Detected in GW: Not reported  
MTBE Detected in Soil: Not reported  
MTBE: 0  
MTBE Qualify: Not reported

LUST NAPA County:

Facility ID: NAPA0054  
Region: NAPA  
Date Closed: 07/23/1996

HAZNET:

Gepaid: CAT080029341  
TSD EPA ID: CAD043260702  
Gen County: Napa  
Tsd County: San Mateo  
Tons: .0000  
Waste Category:  
Disposal Method: Recycler  
Contact: PACIFIC BELL  
Telephone: (925) 823-6161  
Mailing Address: RM 3E000  
SAN RAMON, CA 94583 - 0995  
County Napa

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

PACIFIC BELL (Continued)

1000251880

Gepaid: CAT080029341  
TSD EPA ID: CAD043260702  
Gen County: Napa  
Tsd County: San Mateo  
Tons: 20.0160  
Waste Category: Tank bottom waste  
Disposal Method: Not reported  
Contact: PACIFIC BELL  
Telephone: (925) 823-6161  
Mailing Address: RM 3E000  
SAN RAMON, CA 94583 - 0995  
County Napa

Gepaid: CAT080029341  
TSD EPA ID: CAD083166728  
Gen County: Napa  
Tsd County: Stanislaus  
Tons: .3127  
Waste Category: Unspecified oil-containing waste  
Disposal Method: Recycler  
Contact: PACIFIC BELL  
Telephone: (925) 823-6161  
Mailing Address: RM 3E000  
SAN RAMON, CA 94583 - 0995  
County Napa

Gepaid: CAT080029341  
TSD EPA ID: CAD981388952  
Gen County: Napa  
Tsd County: Shasta  
Tons: .0000  
Waste Category: Asbestos-containing waste  
Disposal Method: Disposal, Land Fill  
Contact: PACIFIC BELL  
Telephone: (925) 823-6161  
Mailing Address: RM 3E000  
SAN RAMON, CA 94583 - 0995  
County Napa

Gepaid: CAT080029341  
TSD EPA ID: CAD083166728  
Gen County: Napa  
Tsd County: Stanislaus  
Tons: .6087  
Waste Category: Unspecified oil-containing waste  
Disposal Method: Recycler  
Contact: PACIFIC BELL  
Telephone: (925) 823-6161  
Mailing Address: RM 3E000  
SAN RAMON, CA 94583 - 0995  
County Napa

The CA HAZNET database contains 2 additional records for this site.  
Please click here or contact your EDR Account Executive for more information.

CORTESE:  
Region: CORTESE  
Fac Address 2: 1240 OAK ST

TC1089548.4s Page 33

| Map ID         | MAP FINDINGS             |                                                               |                |               |
|----------------|--------------------------|---------------------------------------------------------------|----------------|---------------|
| Direction      |                          |                                                               |                | EDR ID Number |
| Distance       |                          |                                                               |                | EPA ID Number |
| Distance (ft.) |                          |                                                               |                |               |
| Elevation      | Site                     | Database(s)                                                   |                |               |
|                | PACIFIC BELL \Continued\ |                                                               |                | 1000251880    |
| 31             | BP                       |                                                               | LUST           | S104025332    |
| SSE            | 1108 MAIN ST             |                                                               | Cortese        | N/A           |
| 1/2-1          | ST HELENA, CA 94574      |                                                               |                |               |
| 4330 ft.       |                          |                                                               |                |               |
| Relative:      | State LUST:              |                                                               |                |               |
| Lower          | Cross Street:            | Pope Street                                                   |                |               |
|                | Qty Leaked:              | Not reported                                                  |                |               |
| Actual:        | Case Number              | 28-0186                                                       |                |               |
| 231 ft.        | Reg Board:               | 2                                                             |                |               |
|                | Chemical:                | Gasoline                                                      |                |               |
|                | Lead Agency:             | Local Agency                                                  |                |               |
|                | Local Agency :           | 0                                                             |                |               |
|                | Case Type:               | Other ground water affected                                   |                |               |
|                | Status:                  | Remedial action \cleanup\ Underway                            |                |               |
|                | Abate Method:            | No Action Taken - no action has as yet been taken at the site |                |               |
|                | Review Date:             | Not reported                                                  | Confirm Leak:  | Not reported  |
|                | Workplan:                | Not reported                                                  | Prelim Assess: | Not reported  |
|                | Pollution Char:          | 4/26/02                                                       | Remed Plan:    | 4/26/02       |
|                | Remed Action:            | 9/11/02                                                       |                |               |
|                | Monitoring:              | Not reported                                                  |                |               |
|                | Close Date:              | Not reported                                                  |                |               |
|                | Release Date:            | 12/17/1990                                                    |                |               |
|                | Cleanup Fund Id :        | Not reported                                                  |                |               |
|                | Discover Date :          | 12/17/1990                                                    |                |               |
|                | Enforcement Dt :         | 11/13/92                                                      |                |               |
|                | Enf Type:                | EF                                                            |                |               |
|                | Enter Date :             | 03/11/1991                                                    |                |               |
|                | Funding:                 | Federal Funds                                                 |                |               |
|                | Staff Initials:          | JMB                                                           |                |               |
|                | How Discovered:          | Tank Closure                                                  |                |               |
|                | How Stopped:             | Not reported                                                  |                |               |
|                | Interim :                | No                                                            |                |               |
|                | Leak Cause:              | Structure Failure                                             |                |               |
|                | Leak Source:             | Tank                                                          |                |               |
|                | MTBE Date :              | 06/28/2002                                                    |                |               |
|                | Max MTBE GW :            | 2700 Parts per Billion                                        |                |               |
|                | MTBE Tested:             | MTBE Detected. Site tested for MTBE & MTBE detected           |                |               |
|                | Priority:                | Not reported                                                  |                |               |
|                | Local Case # :           | 243                                                           |                |               |
|                | Beneficial:              | AGR, GWR, MUN, WILD                                           |                |               |
|                | Staff :                  | MRC                                                           |                |               |
|                | GW Qualifier :           | =                                                             |                |               |
|                | Max MTBE Soil :          | Not reported                                                  |                |               |
|                | Soil Qualifier :         | Not reported                                                  |                |               |
|                | Hydr Basin #:            | Not reported                                                  |                |               |
|                | Operator :               | Not reported                                                  |                |               |
|                | Oversight Prgm:          | Local Oversight Program UST                                   |                |               |
|                | Oversight Prgm :         | LOP                                                           |                |               |
|                | Review Date :            | 06/01/1999                                                    |                |               |
|                | Stop Date :              | 12/17/1990                                                    |                |               |
|                | Work Suspended :         | No                                                            |                |               |
|                | Responsible Party:       | BLANK RP                                                      |                |               |
|                | RP Address:              | Not reported                                                  |                |               |
|                | Global Id:               | T0605500168                                                   |                |               |
|                | Org Name:                | Not reported                                                  |                |               |
|                | Contact Person:          | Not reported                                                  |                |               |
|                | MTBE Conc:               | 7                                                             |                |               |

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s)  
EDR ID Number  
EPA ID Number

BP (Continued)

S104025332

Mtbe Fuel: 1  
Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported

LUST Region 2:

Region: 2  
Case Number: T0605500168  
Facility Id: 28-0186  
Entered Date: 03/11/1991  
Facility Status: Remedial action (cleanup) Underway  
Maximum Soil Concentration: 190  
Maximum Groundwater Impact: 9999999  
County: Napa  
Current Benzene: 190  
MTBE Detected in GW: 2800  
MTBE Detected in Soil: Not reported  
MTBE: 110  
MTBE Qualify: =

CORTESE:

Region: CORTESE  
Fac Address 2: 1108 MAIN ST

E32 ST HELENA PETROLEUM INC  
SSE 929 MAIN ST  
> 1 ST HELENA, CA  
5283 ft.

LUST S104025337  
Cortese N/A

Site 1 of 2 in cluster E

Relative:  
Lower

State LUST:

Actual:  
228 ft.

Cross Street: Not reported  
Qty Leaked: Not reported  
Case Number: 28-0201  
Reg Board: 2  
Chemical: Gasoline  
Lead Agency: Local Agency  
Local Agency: 0  
Case Type: Other ground water affected  
Status: Case Closed  
Abate Method: No Action Taken - no action has as yet been taken at the site  
Review Date: 08/05/1992  
Workplan: Not reported  
Pollution Char: Not reported  
Remed Action: Not reported  
Monitoring: Not reported  
Close Date: 05/29/1997  
Release Date: 08/05/1992  
Cleanup Fund Id: Not reported  
Discover Date: 04/09/1992  
Enforcement Dt: Not reported  
Enf Type: Not reported  
Enter Date: 09/23/1992  
Funding: Federal Funds  
Staff Initials: ZZZ  
How Discovered: Tank Closure  
How Stopped: Not reported  
Interim: No

Confirm Leak: 08/05/1992  
Prelim Assess: Not reported  
Remed Plan: Not reported

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

ST HELENA PETROLEUM INC (Continued)

EDR ID Number  
EPA ID Number

Database(s)

S104025337

Leak Cause: Structure Failure  
Leak Source: Tank  
MTBE Date : / /  
Max MTBE GW : 0 Parts per Billion  
MTBE Tested: Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.  
Priority: Not reported  
Local Case # : 144  
Beneficial: Not reported  
Staff : MRC  
GW Qualifier : Not reported  
Max MTBE Soil : Not reported  
Soil Qualifier : Not reported  
Hydr Basin #: Not reported  
Operator : Not reported  
Oversight Prgm: Local Oversight Program UST  
Oversight Prgm : LOP  
Review Date : 10/29/1999  
Stop Date : 04/09/1992  
Work Suspended :No  
Responsible Party:BLANK RP  
RP Address: Not reported  
Global Id: T0605500182  
Org Name: Not reported  
Contact Person: Not reported  
MTBE Conc: 0  
Mtbe Fuel: 1  
Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported

LUST Region 2:

Region: 2  
Case Number: T0605500182  
Facility Id: 28-0201  
Entered Date: 09/23/1992  
Facility Status: Case Closed  
Maximum Soil Concentration: 230  
Maximum Groundwater Impact: 6400  
County : Napa  
Current Benzene: 15  
MTBE Detected in GW: Not reported  
MTBE Detected in Soil: Not reported  
MTBE: 0  
MTBE Qualify: Not reported

CORTESE:

Region: CORTESE  
Fac Address 2: 929 MAIN ST

| Map ID                   | Direction                                                                                                   | Distance | Distance (ft.) | Elevation | Site                                                      | Database(s)     | EDR ID Number     | EPA ID Number |
|--------------------------|-------------------------------------------------------------------------------------------------------------|----------|----------------|-----------|-----------------------------------------------------------|-----------------|-------------------|---------------|
| E33                      | SE                                                                                                          | > 1      | 5314 ft.       |           | ST HELENA PETROLEUM<br>905 MAIN ST<br>ST HELENA, CA 94574 | LUST<br>Cortese | S104025320<br>N/A |               |
| Site 2 of 2 in cluster E |                                                                                                             |          |                |           |                                                           |                 |                   |               |
| Relative:<br>Lower       | State LUST:                                                                                                 |          |                |           |                                                           |                 |                   |               |
|                          | Cross Street: Not reported                                                                                  |          |                |           |                                                           |                 |                   |               |
|                          | Qty Leaked: Not reported                                                                                    |          |                |           |                                                           |                 |                   |               |
| Actual:<br>229 ft.       | Case Number: 28-0117                                                                                        |          |                |           |                                                           |                 |                   |               |
|                          | Reg Board: 2                                                                                                |          |                |           |                                                           |                 |                   |               |
|                          | Chemical: Misc. Motor Vehicle Fuels                                                                         |          |                |           |                                                           |                 |                   |               |
|                          | Lead Agency: Local Agency                                                                                   |          |                |           |                                                           |                 |                   |               |
|                          | Local Agency: 0                                                                                             |          |                |           |                                                           |                 |                   |               |
|                          | Case Type: Soil only                                                                                        |          |                |           |                                                           |                 |                   |               |
|                          | Status: Case Closed                                                                                         |          |                |           |                                                           |                 |                   |               |
|                          | Abate Method: Excavate and Treat - remove contaminated soil and treat \includes spreading or land farming\) |          |                |           |                                                           |                 |                   |               |
|                          | Review Date: 03/04/1987                                                                                     |          |                |           | Confirm Leak: 03/04/1987                                  |                 |                   |               |
|                          | Workplan: Not reported                                                                                      |          |                |           | Prelim Assess: Not reported                               |                 |                   |               |
|                          | Pollution Char: Not reported                                                                                |          |                |           | Remed Plan: Not reported                                  |                 |                   |               |
|                          | Remed Action: Not reported                                                                                  |          |                |           |                                                           |                 |                   |               |
|                          | Monitoring: Not reported                                                                                    |          |                |           |                                                           |                 |                   |               |
|                          | Close Date: 05/29/1997                                                                                      |          |                |           |                                                           |                 |                   |               |
|                          | Release Date: 02/23/1990                                                                                    |          |                |           |                                                           |                 |                   |               |
|                          | Cleanup Fund Id: Not reported                                                                               |          |                |           |                                                           |                 |                   |               |
|                          | Discover Date: 02/27/1990                                                                                   |          |                |           |                                                           |                 |                   |               |
|                          | Enforcement Dt: 4/4/90                                                                                      |          |                |           |                                                           |                 |                   |               |
|                          | Enf Type: EF                                                                                                |          |                |           |                                                           |                 |                   |               |
|                          | Enter Date: 03/26/1990                                                                                      |          |                |           |                                                           |                 |                   |               |
|                          | Funding: Federal Funds                                                                                      |          |                |           |                                                           |                 |                   |               |
|                          | Staff Initials: ZZZ                                                                                         |          |                |           |                                                           |                 |                   |               |
|                          | How Discovered: Tank Closure                                                                                |          |                |           |                                                           |                 |                   |               |
|                          | How Stopped: Not reported                                                                                   |          |                |           |                                                           |                 |                   |               |
|                          | Interim: Yes                                                                                                |          |                |           |                                                           |                 |                   |               |
|                          | Leak Cause: Structure Failure                                                                               |          |                |           |                                                           |                 |                   |               |
|                          | Leak Source: Tank                                                                                           |          |                |           |                                                           |                 |                   |               |
|                          | MTBE Date: / /                                                                                              |          |                |           |                                                           |                 |                   |               |
|                          | Max MTBE GW: 0 Parts per Billion                                                                            |          |                |           |                                                           |                 |                   |               |
|                          | MTBE Tested: Not Required to be Tested.                                                                     |          |                |           |                                                           |                 |                   |               |
|                          | Priority: Not reported                                                                                      |          |                |           |                                                           |                 |                   |               |
|                          | Local Case #: 145                                                                                           |          |                |           |                                                           |                 |                   |               |
|                          | Beneficial: Not reported                                                                                    |          |                |           |                                                           |                 |                   |               |
|                          | Staff: MRC                                                                                                  |          |                |           |                                                           |                 |                   |               |
|                          | GW Qualifier: Not reported                                                                                  |          |                |           |                                                           |                 |                   |               |
|                          | Max MTBE Soil: Not reported                                                                                 |          |                |           |                                                           |                 |                   |               |
|                          | Soil Qualifier: Not reported                                                                                |          |                |           |                                                           |                 |                   |               |
|                          | Hydr Basin #: Not reported                                                                                  |          |                |           |                                                           |                 |                   |               |
|                          | Operator: Not reported                                                                                      |          |                |           |                                                           |                 |                   |               |
|                          | Oversight Prgm: Local Oversight Program UST                                                                 |          |                |           |                                                           |                 |                   |               |
|                          | Oversight Prgm: LOP                                                                                         |          |                |           |                                                           |                 |                   |               |
|                          | Review Date: 10/29/1999                                                                                     |          |                |           |                                                           |                 |                   |               |
|                          | Stop Date: 02/27/1990                                                                                       |          |                |           |                                                           |                 |                   |               |
|                          | Work Suspended: No                                                                                          |          |                |           |                                                           |                 |                   |               |
|                          | Responsible Party: BLANK RP                                                                                 |          |                |           |                                                           |                 |                   |               |
|                          | RP Address: Not reported                                                                                    |          |                |           |                                                           |                 |                   |               |
|                          | Global Id: T0605500109                                                                                      |          |                |           |                                                           |                 |                   |               |
|                          | Org Name: Not reported                                                                                      |          |                |           |                                                           |                 |                   |               |
|                          | Contact Person: Not reported                                                                                |          |                |           |                                                           |                 |                   |               |

| Map ID       | Direction | Distance | Distance (ft.) | Elevation | Site | Database(s) | EDR ID Number | EPA ID Number |
|--------------|-----------|----------|----------------|-----------|------|-------------|---------------|---------------|
| MAP FINDINGS |           |          |                |           |      |             |               |               |

**ST HELENA PETROLEUM (Continued)****S104025320**

MTBE Conc: 0  
 Mtbe Fuel: 0  
 Water System Name: Not reported  
 Well Name: Not reported  
 Distance To Lust: 0  
 Waste Discharge Global ID: Not reported  
 Waste Disch Assigned Name: Not reported

**LUST Region 2:**

Region: 2  
 Case Number: T0605500109  
 Facility Id: 28-0117  
 Entered Date: 03/26/1990  
 Facility Status: Case Closed  
 Maximum Soil Concentration: 1700  
 Maximum Groundwater Impact: 0  
 County: Napa  
 Current Benzene: Not reported  
 MTBE Detected in GW: Not reported  
 MTBE Detected in Soil: Not reported  
 MTBE: 0  
 MTBE Quality: Not reported

**CORTESE:**

Region: CORTESE  
 Fac Address 2: 905 MAIN ST

**34**  
**SSE**  
**> 1**  
**5467 ft.**

**ST HELENA CITY CORPORATION YARD**  
**1405 CHARTER OAK**  
**ST HELENA, CA 94574**

**LUST**  
**Cortese**

**S104025338**  
**N/A**

**Relative:**  
**Lower**

**Actual:**  
**235 ft.**

**State LUST:**

Cross Street: Not reported  
 Qty Leaked: Not reported  
 Case Number: 28-0205  
 Reg Board: 2  
 Chemical: Diesel  
 Lead Agency: Local Agency  
 Local Agency: 0  
 Case Type: Undefined  
 Status: Leak being confirmed  
 Abate Method: No Action Taken - no action has as yet been taken at the site  
 Review Date: 08/20/1996  
 Workplan: Not reported  
 Pollution Char: Not reported  
 Remed Action: Not reported  
 Monitoring: Not reported  
 Close Date: Not reported  
 Release Date: 06/03/1991  
 Cleanup Fund Id: Not reported  
 Discover Date: 06/07/1991  
 Enforcement Dt: Not reported  
 Enf Type: Not reported  
 Enter Date: 12/29/1992  
 Funding: Federal Funds  
 Staff Initials: JMC  
 How Discovered: Tank Closure  
 How Stopped: Not reported  
 Interim: No

Confirm Leak: 08/20/1996  
 Prelim Assess: Not reported  
 Remed Plan: Not reported



Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

ST HELENA CITY CORPORATION YARD (Continued)

Database(s) EDR ID Number  
EPA ID Number

S104025338

Leak Cause: Structure Failure  
Leak Source: Tank  
MTBE Date : / /  
Max MTBE GW : 0 Parts per Billion  
MTBE Tested: Not Required to be Tested.  
Priority: Not reported  
Local Case # : 608  
Beneficial: Not reported  
Staff : MRC  
GW Qualifier : Not reported  
Max MTBE Soil : Not reported  
Soil Qualifier : Not reported  
Hydr Basin #: Not reported  
Operator : Not reported  
Oversight Prgm: Local Oversight Program UST  
Oversight Prgm : LOP  
Review Date : 07/27/2000  
Stop Date : 06/07/1991  
Work Suspended : No  
Responsible Party: BLANK RP  
RP Address: Not reported  
Global Id: T0605500185  
Org Name: Not reported  
Contact Person: Not reported  
MTBE Conc: 0  
Mtbe Fuel: 0  
Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported

LUST Region 2:

Region: 2  
Case Number: T0605500185  
Facility Id: 28-0205  
Entered Date: 12/29/1992  
Facility Status: Leak being confirmed  
Maximum Soil Concentration: 0  
Maximum Groundwater Impact: 0  
County : Napa  
Current Benzene: Not reported  
MTBE Detected in GW: Not reported  
MTBE Detected in Soil: Not reported  
MTBE: 0  
MTBE Qualify: Not reported

CORTESE:

Region: CORTESE  
Fac Address 2: Not reported

| Map ID             | Direction                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Distance | Distance (ft.) | Elevation | Site                                                    | Database(s)            | EDR ID Number     | EPA ID Number |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------|-----------|---------------------------------------------------------|------------------------|-------------------|---------------|
| 35                 | SE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | > 1      | 5923 ft.       |           | BELLANI RESIDENCE<br>738 MAIN ST<br>ST HELENA, CA 94574 | UST<br>LUST<br>Cortese | U003114816<br>N/A |               |
| Relative:<br>Lower | <p>State LUST:</p> <p>Cross Street: Not reported</p> <p>Qty Leaked: Not reported</p> <p>Case Number: 28-0017</p> <p>Reg Board: 2</p> <p>Chemical: Gasoline</p> <p>Lead Agency: Local Agency</p> <p>Local Agency: 0</p> <p>Case Type: Soil only</p> <p>Status: Case Closed</p> <p>Abate Method: No Action Taken - no action has as yet been taken at the site</p> <p>Review Date: 07/06/1989</p> <p>Workplan: Not reported</p> <p>Pollution Char: Not reported</p> <p>Remed Action: Not reported</p> <p>Monitoring: Not reported</p> <p>Close Date: 06/24/1997</p> <p>Release Date: 04/05/1990</p> <p>Cleanup Fund Id: Not reported</p> <p>Discover Date: 04/09/1990</p> <p>Enforcement Dt: 12/24/91</p> <p>Enf Type: EF</p> <p>Enter Date: 04/23/1990</p> <p>Funding: Federal Funds</p> <p>Staff Initials: ZZZ</p> <p>How Discovered: Tank Closure</p> <p>How Stopped: Not reported</p> <p>Interim: No</p> <p>Leak Cause: Structure Failure</p> <p>Leak Source: Tank</p> <p>MTBE Date: / /</p> <p>Max MTBE GW: 0 Parts per Billion</p> <p>MTBE Tested: Site NOT Tested for MTBE. Includes Unknown and Not Analyzed.</p> <p>Priority: Not reported</p> <p>Local Case #: 283</p> <p>Beneficial: Not reported</p> <p>Staff: MRC</p> <p>GW Qualifier: Not reported</p> <p>Max MTBE Soil: Not reported</p> <p>Soil Qualifier: Not reported</p> <p>Hydr Basin #: Not reported</p> <p>Operator: Not reported</p> <p>Oversight Prgm: Local Oversight Program UST</p> <p>Oversight Prgm: LOP</p> <p>Review Date: 11/21/1996</p> <p>Stop Date: 04/09/1990</p> <p>Work Suspended: No</p> <p>Responsible Party: BLANK RP</p> <p>RP Address: Not reported</p> <p>Global Id: T0605500016</p> <p>Org Name: Not reported</p> <p>Contact Person: Not reported</p> <p>MTBE Conc: 0</p> <p>Mtbe Fuel: 1</p> |          |                |           |                                                         |                        |                   |               |
| Actual:<br>234 ft. | <p>Confirm Leak: 07/06/1989</p> <p>Prelim Assess: Not reported</p> <p>Remed Plan: Not reported</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |          |                |           |                                                         |                        |                   |               |

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

BELLANI RESIDENCE \ (Continued)

EDR ID Number  
EPA ID Number

U003114816

Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported

LUST Region 2:

Region: 2  
Case Number: T0605500016  
Facility Id: 28-0017  
Entered Date: 04/23/1990  
Facility Status: Case Closed  
Maximum Soil Concentration: 4800  
Maximum Groundwater Impact: 0  
County: Napa  
Current Benzene: Not reported  
MTBE Detected in GW: Not reported  
MTBE Detected in Soil: Not reported  
MTBE: 0  
MTBE Qualify: Not reported

LUST NAPA County:

Facility ID: NAPA0283  
Region: NAPA  
Date Closed: 06/24/1997

CORTESE:

Region: CORTESE  
Fac Address 2: 738 MAIN ST

UST Napa County:

Facility ID: NAPA0283 Num of Tanks: 0  
Region: NAPA

36  
South  
> 1  
6336 ft.

ST HELENA CEMETERY ASSOC  
2461 2 SPRING ST  
ST HELENA, CA 94574

LUST S104156903  
Cortese N/A

Relative:  
Higher

LUST Region 2:

Region: 2  
Case Number: T0605500143  
Facility Id: 28-0159  
Entered Date: 01/06/1992  
Facility Status: Pollution Characterization  
Maximum Soil Concentration: 2000  
Maximum Groundwater Impact: 45000  
County: Napa  
Current Benzene: 65  
MTBE Detected in GW: 930  
MTBE Detected in Soil: .11  
MTBE: 1  
MTBE Qualify: =

Actual:  
267 ft.

CORTESE:

Region: CORTESE  
Fac Address 2: 2461 2 SPRING ST

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

ST HELENA CEMETERY ASSOC \ (Continued)

Database(s) EDR ID Number  
EPA ID Number

S104156903

37 EPPS CHEVROLET  
SE 555 MAIN ST  
> 1 ST HELENA, CA 94574  
6506 ft.

LUST S104165817  
Cortese N/A  
HAZNET

Relative:  
Lower

Actual:  
234 ft.

State LUST:

Cross Street: Not reported  
Qty Leaked: Not reported  
Case Number: 28-0267  
Reg Board: 2  
Chemical: Waste Oil  
Lead Agency: Local Agency  
Local Agency: 0  
Case Type: Soil only  
Status: Case Closed  
Review Date: 02/05/1996  
Workplan: Not reported  
Pollution Char: Not reported  
Remed Action: Not reported  
Monitoring: Not reported  
Close Date: 10/13/2000  
Release Date: 05/04/1995  
Cleanup Fund Id: Not reported  
Discover Date: 02/14/1995  
Enforcement Dt: Not reported  
Enf Type: Not reported  
Enter Date: 06/20/1995  
Funding: Not reported  
Staff Initials: ZZZ  
How Discovered: Tank Closure  
How Stopped: Not reported  
Interim: Not reported  
Leak Cause: Corrosion  
Leak Source: Tank  
MTBE Date: 01/02/1965  
Max MTBE GW: 0 Parts per Billion  
MTBE Tested: MTBE Detected. Site tested for MTBE & MTBE detected  
Priority: Not reported  
Local Case #: 639  
Beneficial: Not reported  
Staff: MRC  
GW Qualifier: Not reported  
Max MTBE Soil: Not reported  
Soil Qualifier: Not reported  
Hydr Basin #: Not reported  
Operator: Not reported  
Oversight Prgm: Local Oversight Program UST  
Oversight Prgm: LOP  
Review Date: 03/06/2001  
Stop Date: 02/14/1995  
Work Suspended: No  
Responsible Party: BLANK RP  
RP Address: Not reported  
Global Id: T0605500229  
Org Name: Not reported  
Contact Person: Not reported  
MTBE Conc: 1  
Mtbe Fuel: 0

Confirm Leak: 02/05/1996  
Prelim Assess: Not reported  
Remed Plan: Not reported

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s)

EDR ID Number  
EPA ID Number

**EPPS CHEVROLET (Continued)**

**S104165817**

Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported

**LUST Region 2:**

Region: 2  
Case Number: T0605500229  
Facility Id: 28-0267  
Entered Date: 06/20/1995  
Facility Status: Case Closed  
Maximum Soil Concentration: 0  
Maximum Groundwater Impact: 0  
County: Napa  
Current Benzene: Not reported  
MTBE Detected in GW: No  
MTBE Detected in Soil: Not reported  
MTBE: 0  
MTBE Qualify: ND

**HAZNET:**

Gepaid: CAC000726816  
TSD EPA ID: CAD009466392  
Gen County: Napa  
Tsd County: 7  
Tons: .2500  
Waste Category: Other empty containers 30 gallons or more  
Disposal Method: Recycler  
Contact: JEFFREY EPPS  
Telephone: (707) 963-3681  
Mailing Address: 555 MAIN STREET  
SAINT HELENA, CA 94574  
County: Napa

**CORTESE:**

Region: CORTESE  
Fac Address 2: 555 MAIN ST

MAP FINDINGS - EDR PROPRIETARY HISTORICAL DATABASES

| YEAR                                                                                                                                                                                           | NAME                                                                                                                                                                                                                                                      | ADDRESS                   | CITY       | ST | DIR. | DIST. | ELEV.  | TYPE        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|------------|----|------|-------|--------|-------------|
| N/A                                                                                                                                                                                            | ST. HELENA GAS CO.<br>Description: St. Helena Gas Works is south of Main Street and east of the dead end of Oak Str Sulphur Spring Creek. 1929, site called Napa Valley Electric Co. By 1944, site and Electric St. Helena Sub Station, gas holders gone. | SOUTH OF 1061 MAIN STREET | ST. HELENA | CA | SSE  | 1/2-1 | Higher | NAPA COUNTY |
| ©Copyright 1993 Real Property Scan, Inc.                                                                                                                                                       |                                                                                                                                                                                                                                                           |                           |            |    |      |       |        |             |
| EDR Historical Gas Station & Dry Cleaner Search: No mapped sites were found in EDR's search of the EDR Historical Gas Station & Dry Cleaner Database within 0.250 mile of the Target Property. |                                                                                                                                                                                                                                                           |                           |            |    |      |       |        |             |

ORPHAN SUMMARY

| City         | EDR ID     | Site Name                              | Site Address              | Zip   | Database(s)   |
|--------------|------------|----------------------------------------|---------------------------|-------|---------------|
| HELENA       | S103666643 | FLORA SPRINGS WINE CO                  | 607 SOUTH HELENA SAINT    | 94574 | HAZNET        |
| NAPA         | S105086055 | CALTRANS DIST 4                        | RT 128 P.M. 18.2          | 94574 | HAZNET        |
| RUTHERFORD   | U001598311 | JEAN CLAUDE BOISSET LION IMPOR         | 8440 ST. HELENA HWY       | 94574 | HIST UST      |
| SAINT HELENA | S103967578 | HENDRICK SMEDING                       | 1371 / 1375 MAIN ST       | 94574 | HAZNET        |
| SAINT HELENA | S104575107 | NAPA COUNTY UPPER VALLEY WASTE MGMT AG | 1673 HWY 29               | 94574 | HAZNET        |
| SAINT HELENA | S105084657 | CALTRANS                               | ROUTE 29 IN SULPHUR CREEK | 94574 | HAZNET        |
| ST HELENA    | U003114713 | KUHN PROPERTY                          | 0 HWY 128                 | 94574 | UST           |
| ST HELENA    | S105026749 | TRIPOLI MARKET                         | 607 HWY 29                | 94574 | LUST, Cortese |
| ST HELENA    | S105722400 | C MONDAVI & SONS                       | 2800 ST HELENA HIGHWAY    | 94574 | HAZNET        |
| ST HELENA    | U003114989 | PAT GOLDEN                             | 3291 ST. HELENA HWY       | 94574 | UST           |
| ST HELENA    | 1003878942 | PG&E GAS PLANT ST HELENA               | MAIN ST BR BRIDGE         | 94574 | CERC-NFRAP    |
| ST HELENA    | S106027709 | ST HELENA CEMETERY ASSOC               | SPRING ST                 | 94574 | LUST          |
| ST. HELENA   | U001598332 | RICHARD A. KUHN                        | HWY 128                   | 94574 | HIST UST      |
| ST. HELENA   | U001598273 | BERINGER VINEYARDS                     | 2000 MAIN STREET          | 94574 | HIST UST      |
| ST. HELENA   | U001598278 | COLLINS VINEYARD                       | 3486 N. ST. HELENA HWY    | 94574 | HIST UST      |

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## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

**Elapsed ASTM days:** Provides confirmation that this EDR report meets or exceeds the 90-day updating requirement of the ASTM standard.

### FEDERAL ASTM STANDARD RECORDS

#### **NPL: National Priority List**

Source: EPA

Telephone: N/A

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 07/22/03

Date Made Active at EDR: 08/26/03

Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 08/04/03

Elapsed ASTM days: 22

Date of Last EDR Contact: 11/03/03

#### **NPL Site Boundaries**

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)

Telephone: 202-564-7333

EPA Region 1

Telephone 617-918-1143

EPA Region 3

Telephone 215-814-5418

EPA Region 4

Telephone 404-562-8033

EPA Region 6

Telephone: 214-655-6659

EPA Region 8

Telephone: 303-312-6774

#### **Proposed NPL: Proposed National Priority List Sites**

Source: EPA

Telephone: N/A

Date of Government Version: 06/10/03

Date Made Active at EDR: 08/26/03

Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 08/04/03

Elapsed ASTM days: 22

Date of Last EDR Contact: 11/03/03

#### **CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System**

Source: EPA

Telephone: 703-413-0223

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 09/11/03

Date Made Active at EDR: 10/29/03

Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 09/24/03

Elapsed ASTM days: 35

Date of Last EDR Contact: 09/24/03

#### **CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned**

Source: EPA

Telephone: 703-413-0223

As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration. EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 09/11/03  
 Date Made Active at EDR: 10/29/03  
 Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 09/24/03  
 Elapsed ASTM days: 35  
 Date of Last EDR Contact: 09/24/03

**CORRACTS:** Corrective Action Report

Source: EPA

Telephone: 800-424-9346

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 09/17/03  
 Date Made Active at EDR: 11/11/03  
 Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 10/01/03  
 Elapsed ASTM days: 41  
 Date of Last EDR Contact: 09/08/03

**RCRIS:** Resource Conservation and Recovery Information System

Source: EPA

Telephone: 800-424-9346

Resource Conservation and Recovery Information System. RCRIS includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs): generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs): generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs): generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 09/10/03  
 Date Made Active at EDR: 10/01/03  
 Database Release Frequency: Varies

Date of Data Arrival at EDR: 09/11/03  
 Elapsed ASTM days: 20  
 Date of Last EDR Contact: 11/18/03

**ERNS:** Emergency Response Notification System

Source: National Response Center, United States Coast Guard

Telephone: 202-260-2342

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/02  
 Date Made Active at EDR: 02/03/03  
 Database Release Frequency: Annually

Date of Data Arrival at EDR: 01/27/03  
 Elapsed ASTM days: 7  
 Date of Last EDR Contact: 10/27/03

**FEDERAL ASTM SUPPLEMENTAL RECORDS**

**BRS:** Biennial Reporting System

Source: EPA/NTIS

Telephone: 800-424-9346

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/01/01  
 Database Release Frequency: Biennially

Date of Last EDR Contact: 10/01/03  
 Date of Next Scheduled EDR Contact: 12/15/03

**CONSENT:** Superfund (CERCLA) Consent Decrees

Source: EPA Regional Offices

Telephone: Varies

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: N/A  
 Database Release Frequency: Varies

Date of Last EDR Contact: N/A  
 Date of Next Scheduled EDR Contact: N/A

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

**ROD: Records Of Decision**

Source: EPA

Telephone: 703-416-0223

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 07/09/03

Database Release Frequency: Annually

Date of Last EDR Contact: 10/08/03

Date of Next Scheduled EDR Contact: 01/05/04

**DELISTED NPL: National Priority List Deletions**

Source: EPA

Telephone: N/A

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 07/22/03

Database Release Frequency: Quarterly

Date of Last EDR Contact: 11/03/03

Date of Next Scheduled EDR Contact: 02/02/04

**FINDS: Facility Index System/Facility Identification Initiative Program Summary Report**

Source: EPA

Telephone: N/A

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 07/25/03

Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/07/03

Date of Next Scheduled EDR Contact: 01/05/04

**HMIRS: Hazardous Materials Information Reporting System**

Source: U.S. Department of Transportation

Telephone: 202-366-4555

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 03/31/03

Database Release Frequency: Annually

Date of Last EDR Contact: 10/23/03

Date of Next Scheduled EDR Contact: 01/19/04

**MLTS: Material Licensing Tracking System**

Source: Nuclear Regulatory Commission

Telephone: 301-415-7169

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/16/03

Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/07/03

Date of Next Scheduled EDR Contact: 01/05/04

**MINES: Mines Master Index File**

Source: Department of Labor, Mine Safety and Health Administration

Telephone: 303-231-5959

Date of Government Version: 08/27/03

Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 10/01/03

Date of Next Scheduled EDR Contact: 12/29/03

**NPL LIENS: Federal Superfund Liens**

Source: EPA

Telephone: 202-564-4267

Federal Superfund Liens. Under the authority granted the USEPA by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner receives notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/15/91  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 08/25/03  
Date of Next Scheduled EDR Contact: 11/24/03

**PADS: PCB Activity Database System**

Source: EPA

Telephone: 202-564-3887

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 06/30/03  
Database Release Frequency: Annually

Date of Last EDR Contact: 11/12/03  
Date of Next Scheduled EDR Contact: 02/09/04

**DOD: Department of Defense Sites**

Source: USGS

Telephone: 703-648-5920

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 04/01/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 11/12/03  
Date of Next Scheduled EDR Contact: 02/09/04

**STORMWATER: Storm Water General Permits**

Source: Environmental Protection Agency

Telephone: 202 564-0746

A listing of all facilities with Storm Water General Permits.

Date of Government Version: N/A  
Database Release Frequency: Quarterly

Date of Last EDR Contact: N/A  
Date of Next Scheduled EDR Contact: N/A

**US BROWNFIELDS: A Listing of Brownfields Sites**

Source: Environmental Protection Agency

Telephone: 202-566-2777

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become BCRLF cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 07/15/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 09/15/03  
Date of Next Scheduled EDR Contact: 12/15/03

**RMP: Risk Management Plans**

Source: Environmental Protection Agency

Telephone: 202-564-8600

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: N/A  
Database Release Frequency: N/A

Date of Last EDR Contact: N/A  
Date of Next Scheduled EDR Contact: N/A

**RAATS: RCRA Administrative Action Tracking System**

Source: EPA

Telephone: 202-564-4104

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/95  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 09/08/03  
Date of Next Scheduled EDR Contact: 12/08/03

**TRIS: Toxic Chemical Release Inventory System**

Source: EPA

Telephone: 202-260-1531

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/01  
Database Release Frequency: Annually

Date of Last EDR Contact: 09/23/03  
Date of Next Scheduled EDR Contact: 12/22/03

**TSCA: Toxic Substances Control Act**

Source: EPA

Telephone: 202-260-5521

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/98  
Database Release Frequency: Every 4 Years

Date of Last EDR Contact: 09/02/03  
Date of Next Scheduled EDR Contact: 12/08/03

**FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)**

Source: EPA

Telephone: 202-564-2501

Date of Government Version: 10/16/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/23/03  
Date of Next Scheduled EDR Contact: 12/22/03

**SSTS: Section 7 Tracking Systems**

Source: EPA

Telephone: 202-564-5008

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/01  
Database Release Frequency: Annually

Date of Last EDR Contact: 10/20/03  
Date of Next Scheduled EDR Contact: 01/19/04

**FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)**

Source: EPA/Office of Prevention, Pesticides and Toxic Substances

Telephone: 202-564-2501

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/16/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/23/03  
Date of Next Scheduled EDR Contact: 12/22/03

### STATE OF CALIFORNIA ASTM STANDARD RECORDS

#### **AWP: Annual Workplan Sites**

Source: California Environmental Protection Agency  
Telephone: 916-323-3400

Known Hazardous Waste Sites. California DTSC's Annual Workplan (AWP), formerly BEP, identifies known hazardous substance sites targeted for cleanup.

Date of Government Version: 08/31/03  
Date Made Active at EDR: 09/17/03  
Database Release Frequency: Annually

Date of Data Arrival at EDR: 09/02/03  
Elapsed ASTM days: 15  
Date of Last EDR Contact: 09/02/03

#### **CAL-SITES: Calsites Database**

Source: Department of Toxic Substance Control  
Telephone: 916-323-3400

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database.

Date of Government Version: 08/31/03  
Date Made Active at EDR: 09/17/03  
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 09/02/03  
Elapsed ASTM days: 15  
Date of Last EDR Contact: 09/02/03

#### **CHMIRS: California Hazardous Material Incident Report System**

Source: Office of Emergency Services  
Telephone: 916-845-8400

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/31/02  
Date Made Active at EDR: 08/07/03  
Database Release Frequency: Varies

Date of Data Arrival at EDR: 07/11/03  
Elapsed ASTM days: 27  
Date of Last EDR Contact: 08/25/03

#### **CORTESE: "Cortese" Hazardous Waste & Substances Sites List**

Source: CAL EPA/Office of Emergency Information  
Telephone: 916-323-9100

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 04/01/01  
Date Made Active at EDR: 07/26/01  
Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 05/29/01  
Elapsed ASTM days: 58  
Date of Last EDR Contact: 10/27/03

#### **NOTIFY 65: Proposition 65 Records**

Source: State Water Resources Control Board  
Telephone: 916-445-3846

Proposition 65 Notification Records. NOTIFY 65 contains facility notifications about any release which could impact drinking water and thereby expose the public to a potential health risk.

Date of Government Version: 10/21/93  
Date Made Active at EDR: 11/19/93  
Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 11/01/93  
Elapsed ASTM days: 18  
Date of Last EDR Contact: 10/20/03

#### **TOXIC PITS: Toxic Pits Cleanup Act Sites**

Source: State Water Resources Control Board  
Telephone: 916-227-4364

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.



## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 07/01/95  
 Date Made Active at EDR: 09/26/95  
 Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 08/30/95  
 Elapsed ASTM days: 27  
 Date of Last EDR Contact: 11/03/03

**SWF/LF (SWIS): Solid Waste Information System**

Source: Integrated Waste Management Board  
 Telephone: 916-341-6320

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inventory of solid waste disposal facilities or landfills. These may be active or inactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 09/12/03  
 Date Made Active at EDR: 10/16/03  
 Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 09/15/03  
 Elapsed ASTM days: 31  
 Date of Last EDR Contact: 09/15/03

**WMUDS/SWAT: Waste Management Unit Database**

Source: State Water Resources Control Board  
 Telephone: 916-227-4448

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/00  
 Date Made Active at EDR: 05/10/00  
 Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 04/10/00  
 Elapsed ASTM days: 30  
 Date of Last EDR Contact: 09/12/03

**LUST: Leaking Underground Storage Tank Information System**

Source: State Water Resources Control Board  
 Telephone: 916-341-5740

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 04/02/03  
 Date Made Active at EDR: 04/25/03  
 Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 04/16/03  
 Elapsed ASTM days: 9  
 Date of Last EDR Contact: 10/14/03

**CA BOND EXP. PLAN: Bond Expenditure Plan**

Source: Department of Health Services  
 Telephone: 916-255-2118

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/89  
 Date Made Active at EDR: 08/02/94  
 Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 07/27/94  
 Elapsed ASTM days: 6  
 Date of Last EDR Contact: 05/31/94

**CA UST:**

**UST: Active UST Facilities**

Source: SWRCB  
 Telephone: 916-341-5700

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 04/02/03  
 Date Made Active at EDR: 04/30/03  
 Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 04/16/03  
 Elapsed ASTM days: 14  
 Date of Last EDR Contact: 10/14/03

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

**VCP: Voluntary Cleanup Program Properties**

Source: Department of Toxic Substances Control

Telephone: 916-323-3400

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 08/31/03

Date Made Active at EDR: 09/17/03

Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 09/02/03

Elapsed ASTM days: 15

Date of Last EDR Contact: 09/02/03

**INDIAN UST: Underground Storage Tanks on Indian Land**

Source: EPA Region 9

Telephone: 415-972-3368

Date of Government Version: N/A

Date Made Active at EDR: N/A

Database Release Frequency: Varies

Date of Data Arrival at EDR: N/A

Elapsed ASTM days: 0

Date of Last EDR Contact: N/A

**CA FID UST: Facility Inventory Database**

Source: California Environmental Protection Agency

Telephone: 916-445-6532

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/94

Date Made Active at EDR: 09/29/95

Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 09/05/95

Elapsed ASTM days: 24

Date of Last EDR Contact: 12/28/98

**HIST UST: Hazardous Substance Storage Container Database**

Source: State Water Resources Control Board

Telephone: 916-341-5700

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/90

Date Made Active at EDR: 02/12/91

Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 01/25/91

Elapsed ASTM days: 18

Date of Last EDR Contact: 07/26/01

**STATE OF CALIFORNIA ASTM SUPPLEMENTAL RECORDS****AST: Aboveground Petroleum Storage Tank Facilities**

Source: State Water Resources Control Board

Telephone: 916-341-5712

Registered Aboveground Storage Tanks.

Date of Government Version: 07/01/03

Database Release Frequency: Quarterly

Date of Last EDR Contact: 11/03/03

Date of Next Scheduled EDR Contact: 02/02/04

**CLEANERS: Cleaner Facilities**

Source: Department of Toxic Substance Control

Telephone: 916-225-0873

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 03/11/03

Database Release Frequency: Annually

Date of Last EDR Contact: 10/20/03

Date of Next Scheduled EDR Contact: 01/05/04



## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

**CA WDS: Waste Discharge System**

Source: State Water Resources Control Board

Telephone: 916-657-1571

Sites which have been issued waste discharge requirements.

Date of Government Version: 09/22/03

Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/24/03

Date of Next Scheduled EDR Contact: 12/22/03

**DEED: List of Deed Restrictions**

Source: Department of Toxic Substances Control

Telephone: 916-323-3400

The use of recorded land use restrictions is one of the methods the DTSC uses to protect the public from unsafe exposures to hazardous substances and wastes.

Date of Government Version: 10/07/03

Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 10/08/03

Date of Next Scheduled EDR Contact: 01/05/04

**NFA: No Further Action Determination**

Source: Department of Toxic Substances Control

Telephone: 916-323-3400

This category contains properties at which DTSC has made a clear determination that the property does not pose a problem to the environment or to public health.

Date of Government Version: 08/31/03

Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/02/03

Date of Next Scheduled EDR Contact: 12/01/03

**EMI: Emissions Inventory Data**

Source: California Air Resources Board

Telephone: 916-322-2990

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/01

Database Release Frequency: Varies

Date of Last EDR Contact: 10/20/03

Date of Next Scheduled EDR Contact: 01/19/04

**REF: Unconfirmed Properties Referred to Another Agency**

Source: Department of Toxic Substances Control

Telephone: 916-323-3400

This category contains properties where contamination has not been confirmed and which were determined as not requiring direct DTSC Site Mitigation Program action or oversight. Accordingly, these sites have been referred to another state or local regulatory agency.

Date of Government Version: 08/31/03

Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/02/03

Date of Next Scheduled EDR Contact: 12/01/03

**SCH: School Property Evaluation Program**

Source: Department of Toxic Substances Control

Telephone: 916-323-3400

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 08/31/03

Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/02/03

Date of Next Scheduled EDR Contact: 12/01/03

**NFE: Properties Needing Further Evaluation**

Source: Department of Toxic Substances Control

Telephone: 916-323-3400

This category contains properties that are suspected of being contaminated. These are unconfirmed contaminated properties that need to be assessed using the PEA process. PEA In Progress indicates properties where DTSC is currently conducting a PEA. PEA Required indicates properties where DTSC has determined a PEA is required, but not currently underway.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 08/31/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/02/03  
Date of Next Scheduled EDR Contact: 12/01/03

**HAZNET:** Hazardous Waste Information System  
Source: California Environmental Protection Agency  
Telephone: 916-255-1136

**Facility and Manifest Data.** The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method.

Date of Government Version: 12/31/01  
Database Release Frequency: Annually

Date of Last EDR Contact: 11/11/03  
Date of Next Scheduled EDR Contact: 02/09/04

### LOCAL RECORDS

#### **ALAMEDA COUNTY:**

**Local Oversight Program Listing of UGT Cleanup Sites**  
Source: Alameda County Environmental Health Services  
Telephone: 510-567-6700

Date of Government Version: 07/03/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 10/27/03  
Date of Next Scheduled EDR Contact: 01/26/04

#### **Underground Tanks**

Source: Alameda County Environmental Health Services  
Telephone: 510-567-6700

Date of Government Version: 07/03/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 10/27/03  
Date of Next Scheduled EDR Contact: 01/26/04

#### **CONTRA COSTA COUNTY:**

##### **Site List**

Source: Contra Costa Health Services Department  
Telephone: 925-646-2286

List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 09/04/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 09/02/03  
Date of Next Scheduled EDR Contact: 12/01/03

#### **FRESNO COUNTY:**

##### **CUPA Resources List**

Source: Dept. of Community Health  
Telephone: 559-445-3271

**Certified Unified Program Agency.** CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 10/07/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 10/08/03  
Date of Next Scheduled EDR Contact: 02/09/04

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

### KERN COUNTY:

#### Underground Storage Tank Sites & Tank Listing

Source: Kern County Environment Health Services Department  
Telephone: 661-862-8700  
Kern County Sites and Tanks Listing.

Date of Government Version: 07/25/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/08/03  
Date of Next Scheduled EDR Contact: 12/08/03

### LOS ANGELES COUNTY:

#### List of Solid Waste Facilities

Source: La County Department of Public Works  
Telephone: 818-458-5185

Date of Government Version: 06/03/03  
Database Release Frequency: Varies

Date of Last EDR Contact: 08/18/03  
Date of Next Scheduled EDR Contact: 11/17/03

#### City of El Segundo Underground Storage Tank

Source: City of El Segundo Fire Department  
Telephone: 310-524-2236

Date of Government Version: 09/11/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 11/17/03  
Date of Next Scheduled EDR Contact: 02/16/04

#### City of Long Beach Underground Storage Tank

Source: City of Long Beach Fire Department  
Telephone: 562-570-2543

Date of Government Version: 03/28/03  
Database Release Frequency: Annually

Date of Last EDR Contact: 11/24/03  
Date of Next Scheduled EDR Contact: 02/23/04

#### City of Torrance Underground Storage Tank

Source: City of Torrance Fire Department  
Telephone: 310-618-2973

Date of Government Version: 09/03/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 11/17/03  
Date of Next Scheduled EDR Contact: 02/16/04

#### City of Los Angeles Landfills

Source: Engineering & Construction Division  
Telephone: 213-473-7869

Date of Government Version: 03/01/02  
Database Release Frequency: Varies

Date of Last EDR Contact: 09/15/03  
Date of Next Scheduled EDR Contact: 12/15/03

#### HMS: Street Number List

Source: Department of Public Works  
Telephone: 626-458-3517  
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 09/30/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 11/17/03  
Date of Next Scheduled EDR Contact: 02/16/04

#### Site Mitigation List

Source: Community Health Services  
Telephone: 323-890-7806  
Industrial sites that have had some sort of spill or complaint.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 01/07/03  
Database Release Frequency: Annually

Date of Last EDR Contact: 11/17/03  
Date of Next Scheduled EDR Contact: 02/16/04

### San Gabriel Valley Areas of Concern

Source: EPA Region 9  
Telephone: 415-972-3178

San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 12/31/98  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 07/06/99  
Date of Next Scheduled EDR Contact: N/A

### MARIN COUNTY:

#### Underground Storage Tank Sites

Source: Public Works Department Waste Management  
Telephone: 415-499-6647  
Currently permitted USTs in Marin County.

Date of Government Version: 08/19/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 11/03/03  
Date of Next Scheduled EDR Contact: 02/02/04

### NAPA COUNTY:

#### Sites With Reported Contamination

Source: Napa County Department of Environmental Management  
Telephone: 707-253-4269

Date of Government Version: 10/02/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 09/30/03  
Date of Next Scheduled EDR Contact: 12/29/03

#### Closed and Operating Underground Storage Tank Sites

Source: Napa County Department of Environmental Management  
Telephone: 707-253-4269

Date of Government Version: 10/02/03  
Database Release Frequency: Annually

Date of Last EDR Contact: 09/30/03  
Date of Next Scheduled EDR Contact: 12/29/03

### ORANGE COUNTY:

#### List of Underground Storage Tank Cleanups

Source: Health Care Agency  
Telephone: 714-834-3446  
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 07/01/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/11/03  
Date of Next Scheduled EDR Contact: 12/08/03

#### List of Underground Storage Tank Facilities

Source: Health Care Agency  
Telephone: 714-834-3446  
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 09/02/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/11/03  
Date of Next Scheduled EDR Contact: 12/08/03

#### List of Industrial Site Cleanups

Source: Health Care Agency  
Telephone: 714-834-3446  
Petroleum and non-petroleum spills.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/24/00  
Database Release Frequency: Annually

Date of Last EDR Contact: 09/11/03  
Date of Next Scheduled EDR Contact: 12/08/03

### PLACER COUNTY:

#### Master List of Facilities

Source: Placer County Health and Human Services  
Telephone: 530-889-7312

List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 10/16/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 09/23/03  
Date of Next Scheduled EDR Contact: 12/22/03

### RIVERSIDE COUNTY:

#### Listing of Underground Tank Cleanup Sites

Source: Department of Public Health  
Telephone: 909-358-5055

Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 06/03/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/20/03  
Date of Next Scheduled EDR Contact: 01/19/04

#### Underground Storage Tank Tank List

Source: Health Services Agency  
Telephone: 909-358-5055

Date of Government Version: 05/30/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/20/03  
Date of Next Scheduled EDR Contact: 01/19/04

### SACRAMENTO COUNTY:

#### CS - Contaminated Sites

Source: Sacramento County Environmental Management  
Telephone: 916-875-8406

Date of Government Version: 07/17/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 11/03/03  
Date of Next Scheduled EDR Contact: 02/02/04

#### ML - Regulatory Compliance Master List

Source: Sacramento County Environmental Management  
Telephone: 916-875-8406

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 07/17/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 11/03/03  
Date of Next Scheduled EDR Contact: 02/02/04

### SAN BERNARDINO COUNTY:

#### Hazardous Material Permits

Source: San Bernardino County Fire Department Hazardous Materials Division  
Telephone: 909-387-3041

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 09/30/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/09/03  
Date of Next Scheduled EDR Contact: 12/08/03

### SAN DIEGO COUNTY:

#### Solid Waste Facilities

Source: Department of Health Services  
Telephone: 619-338-2209  
San Diego County Solid Waste Facilities.

Date of Government Version: 08/01/00  
Database Release Frequency: Varies

Date of Last EDR Contact: 08/25/03  
Date of Next Scheduled EDR Contact: 11/24/03

#### Hazardous Materials Management Division Database

Source: Hazardous Materials Management Division  
Telephone: 619-338-2268

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 03/31/02  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/07/03  
Date of Next Scheduled EDR Contact: 01/05/04

### SAN FRANCISCO COUNTY:

#### Local Oversight Facilities

Source: Department Of Public Health San Francisco County  
Telephone: 415-252-3920

Date of Government Version: 09/11/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/08/03  
Date of Next Scheduled EDR Contact: 12/08/03

#### Underground Storage Tank Information

Source: Department of Public Health  
Telephone: 415-252-3920

Date of Government Version: 09/11/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/08/03  
Date of Next Scheduled EDR Contact: 12/08/03

### SAN MATEO COUNTY:

#### Fuel Leak List

Source: San Mateo County Environmental Health Services Division  
Telephone: 650-363-1921

Date of Government Version: 07/21/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 10/27/03  
Date of Next Scheduled EDR Contact: 01/26/04

#### Business Inventory

Source: San Mateo County Environmental Health Services Division  
Telephone: 650-363-1921

List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 06/16/03  
Database Release Frequency: Annually

Date of Last EDR Contact: 10/13/03  
Date of Next Scheduled EDR Contact: 01/12/04

### SANTA CLARA COUNTY:

#### Fuel Leak Site Activity Report

Source: Santa Clara Valley Water District  
Telephone: 408-265-2600

Date of Government Version: 07/02/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 09/30/03  
Date of Next Scheduled EDR Contact: 12/29/03

#### Hazardous Material Facilities

Source: City of San Jose Fire Department  
Telephone: 408-277-4659

Date of Government Version: 10/01/03  
Database Release Frequency: Annually

Date of Last EDR Contact: 09/08/03  
Date of Next Scheduled EDR Contact: 12/08/03

### SOLANO COUNTY:

#### Leaking Underground Storage Tanks

Source: Solano County Department of Environmental Management  
Telephone: 707-421-6770

Date of Government Version: 08/21/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/15/03  
Date of Next Scheduled EDR Contact: 12/15/03

#### Underground Storage Tanks

Source: Solano County Department of Environmental Management  
Telephone: 707-421-6770

Date of Government Version: 08/21/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/15/03  
Date of Next Scheduled EDR Contact: 12/15/03

### SONOMA COUNTY:

#### Leaking Underground Storage Tank Sites

Source: Department of Health Services  
Telephone: 707-565-6565

Date of Government Version: 10/01/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/27/03  
Date of Next Scheduled EDR Contact: 01/26/04

### SUTTER COUNTY:

#### Underground Storage Tanks

Source: Sutter County Department of Agriculture  
Telephone: 530-822-7500

Date of Government Version: 07/01/01  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 10/27/03  
Date of Next Scheduled EDR Contact: 01/05/04

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

### VENTURA COUNTY:

#### Inventory of Illegal Abandoned and Inactive Sites

Source: Environmental Health Division  
 Telephone: 805-654-2813  
 Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 09/01/02  
 Database Release Frequency: Annually

Date of Last EDR Contact: 08/26/03  
 Date of Next Scheduled EDR Contact: 11/24/03

#### Listing of Underground Tank Cleanup Sites

Source: Environmental Health Division  
 Telephone: 805-654-2813  
 Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 09/26/03  
 Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/15/03  
 Date of Next Scheduled EDR Contact: 12/15/03

#### Underground Tank Closed Sites List

Source: Environmental Health Division  
 Telephone: 805-654-2813  
 Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 07/30/03  
 Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/16/03  
 Date of Next Scheduled EDR Contact: 01/12/04

#### Business Plan, Hazardous Waste Producers, and Operating Underground Tanks

Source: Ventura County Environmental Health Division  
 Telephone: 805-654-2813  
 The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 09/02/03  
 Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/15/03  
 Date of Next Scheduled EDR Contact: 12/15/03

### YOLO COUNTY:

#### Underground Storage Tank Comprehensive Facility Report

Source: Yolo County Department of Health  
 Telephone: 530-666-8646

Date of Government Version: 06/19/03  
 Database Release Frequency: Annually

Date of Last EDR Contact: 10/20/03  
 Date of Next Scheduled EDR Contact: 01/19/04

#### California Regional Water Quality Control Board (RWQCB) LUST Records

##### LUST REG 1: Active Toxic Site Investigation

Source: California Regional Water Quality Control Board North Coast (1)  
 Telephone: 707-576-2220

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/01  
 Database Release Frequency: No Update Planned

Date of Last EDR Contact: 08/25/03  
 Date of Next Scheduled EDR Contact: 11/24/03

##### LUST REG 2: Fuel Leak List

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)  
 Telephone: 510-286-0457



## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 03/28/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/14/03  
Date of Next Scheduled EDR Contact: 01/12/04

**LUST REG 3:** Leaking Underground Storage Tank Database  
Source: California Regional Water Quality Control Board Central Coast Region (3)  
Telephone: 805-549-3147

Date of Government Version: 05/19/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 11/17/03  
Date of Next Scheduled EDR Contact: 02/16/04

**LUST REG 4:** Underground Storage Tank Leak List  
Source: California Regional Water Quality Control Board Los Angeles Region (4)  
Telephone: 213-266-6600  
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 08/09/01  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 09/30/03  
Date of Next Scheduled EDR Contact: 12/29/03

**LUST REG 5:** Leaking Underground Storage Tank Database  
Source: California Regional Water Quality Control Board Central Valley Region (5)  
Telephone: 916-255-3125

Date of Government Version: 07/01/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/16/03  
Date of Next Scheduled EDR Contact: 01/05/04

**LUST REG 6L:** Leaking Underground Storage Tank Case Listing  
Source: California Regional Water Quality Control Board Lahontan Region (6)  
Telephone: 916-542-5424  
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/03  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 09/08/03  
Date of Next Scheduled EDR Contact: 12/08/03

**LUST REG 6V:** Leaking Underground Storage Tank Case Listing  
Source: California Regional Water Quality Control Board Victorville Branch Office (6)  
Telephone: 760-346-7491

Date of Government Version: 05/29/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/07/03  
Date of Next Scheduled EDR Contact: 01/05/04

**LUST REG 7:** Leaking Underground Storage Tank Case Listing  
Source: California Regional Water Quality Control Board Colorado River Basin Region (7)  
Telephone: 760-346-7491

Date of Government Version: 07/02/02  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 09/30/03  
Date of Next Scheduled EDR Contact: 12/29/03

**LUST REG 8:** Leaking Underground Storage Tanks  
Source: California Regional Water Quality Control Board Santa Ana Region (8)  
Telephone: 909-782-4498  
California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/16/03  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 11/12/03  
Date of Next Scheduled EDR Contact: 02/09/04

**LUST REG 9:** Leaking Underground Storage Tank Report  
Source: California Regional Water Quality Control Board San Diego Region (9)  
Telephone: 858-467-2980  
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 03/01/01  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 10/20/03  
Date of Next Scheduled EDR Contact: 01/19/04

### California Regional Water Quality Control Board (RWQCB) SLIC Records

#### SLIC REG 1: Active Toxic Site Investigations

Source: California Regional Water Quality Control Board, North Coast Region (1)  
Telephone: 707-576-2220

Date of Government Version: 04/03/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 08/25/03  
Date of Next Scheduled EDR Contact: 11/24/04

#### SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Source: Regional Water Quality Control Board San Francisco Bay Region (2)  
Telephone: 510-286-0457

Any contaminated site that impacts groundwater or has the potential to impact groundwater.

Date of Government Version: 03/28/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/14/03  
Date of Next Scheduled EDR Contact: 01/12/04

#### SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Source: California Regional Water Quality Control Board Central Coast Region (3)  
Telephone: 805-549-3147

Any contaminated site that impacts groundwater or has the potential to impact groundwater.

Date of Government Version: 09/16/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 11/17/03  
Date of Next Scheduled EDR Contact: 02/16/04

#### SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Source: Region Water Quality Control Board Los Angeles Region (4)  
Telephone: 213-576-6600

Any contaminated site that impacts groundwater or has the potential to impact groundwater.

Date of Government Version: 10/01/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/27/03  
Date of Next Scheduled EDR Contact: 01/26/04

#### SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Source: Regional Water Quality Control Board Central Valley Region (5)  
Telephone: 916-855-3075

Unregulated sites that impact groundwater or have the potential to impact groundwater.

Date of Government Version: 10/20/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 10/07/03  
Date of Next Scheduled EDR Contact: 01/05/04

#### SLIC REG 6L: SLIC Sites

Source: California Regional Water Quality Control Board, Lahontan Region  
Telephone: 530-542-5574

Date of Government Version: 09/09/03  
Database Release Frequency: Varies

Date of Last EDR Contact: 09/08/03  
Date of Next Scheduled EDR Contact: 12/08/03

#### SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Source: Regional Water Quality Control Board, Victorville Branch  
Telephone: 619-241-6583

Date of Government Version: 05/08/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 10/07/03  
Date of Next Scheduled EDR Contact: 01/05/04

#### SLIC REG 7: SLIC List

Source: California Regional Quality Control Board, Colorado River Basin Region  
Telephone: 760-346-7491

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 05/29/03  
Database Release Frequency: Varies

Date of Last EDR Contact: 09/08/03  
Date of Next Scheduled EDR Contact: 11/24/03

**SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing**  
Source: California Region Water Quality Control Board Santa Ana Region (8)  
Telephone: 909-782-3298

Date of Government Version: 04/01/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 10/20/03  
Date of Next Scheduled EDR Contact: 01/05/04

**SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing**  
Source: California Regional Water Quality Control Board San Diego Region (9)  
Telephone: 858-467-2980

Date of Government Version: 09/08/03  
Database Release Frequency: Annually

Date of Last EDR Contact: 09/02/03  
Date of Next Scheduled EDR Contact: 12/01/03

### EDR PROPRIETARY HISTORICAL DATABASES

**EDR Historical Gas Station and Dry Cleaners:** EDR has searched select national collections of business directories and has collected listings of potential dry cleaner and gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning and gas station/filling station/service station establishments. The categories reviewed included, but were not limited to: *gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, dry cleaner, cleaners, laundry, laundromat, cleaning/laundry, wash & dry, etc.*

This information is meant to assist and complement environmental professionals in their conduct of environmental site assessments, and is not meant to be a substitute for a full historical investigation as defined in ASTM E1527. The information provided in this proprietary database may or may not be complete; i.e., the absence of a dry cleaner or gas station/filling station/service station site does not necessarily mean that such a site did not exist in the area covered by this report.

*(A note on "dry cleaning" sites: it is not possible for EDR to differentiate between establishments that use PERC on-site as a cleaning solvent and sites that function simply as drop-off and pick-up locations or that are traditional wet cleaning/laundry facilities. Therefore, it is essential for environmental professionals to incorporate professional judgment in the evaluation of each site.)*

**Former Manufactured Gas (Coal Gas) Sites:** The existence and location of Coal Gas sites is provided exclusively to EDR by Real Property Scan, Inc. ©Copyright 1993 Real Property Scan, Inc. For a technical description of the types of hazards which may be found at such sites, contact your EDR customer service representative.

#### **Disclaimer Provided by Real Property Scan, Inc.**

The information contained in this report has predominantly been obtained from publicly available sources produced by entities other than Real Property Scan. While reasonable steps have been taken to insure the accuracy of this report, Real Property Scan does not guarantee the accuracy of this report. Any liability on the part of Real Property Scan is strictly limited to a refund of the amount paid. No claim is made for the actual existence of toxins at any site. This report does not constitute a legal opinion.

### BROWNFIELDS DATABASES

**VCP: Voluntary Cleanup Program Properties**  
Source: Department of Toxic Substances Control  
Telephone: 916-323-3400

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 08/31/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/02/03  
Date of Next Scheduled EDR Contact: 12/01/03

#### **US BROWNFIELDS: A Listing of Brownfields Sites**

Source: Environmental Protection Agency  
Telephone: 202-566-2777

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become BCRLF cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: N/A  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: N/A  
Date of Next Scheduled EDR Contact: N/A

#### **OTHER DATABASE(S)**

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

**Oil/Gas Pipelines:** This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

#### **Electric Power Transmission Line Data**

Source: PennWell Corporation  
Telephone: (800) 823-6277

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**Sensitive Receptors:** There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

#### **AHA Hospitals:**

Source: American Hospital Association, Inc.  
Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

#### **Medical Centers: Provider of Services Listing**

Source: Centers for Medicare & Medicaid Services  
Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

#### **Nursing Homes**

Source: National Institutes of Health  
Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

#### **Public Schools**

Source: National Center for Education Statistics  
Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

### MAP FINDINGS SUMMARY

| Database                                       | Target<br>Property | Search<br>Distance<br>(Miles) | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total<br>Plotted |
|------------------------------------------------|--------------------|-------------------------------|-------|-----------|-----------|---------|-----|------------------|
| <b><u>FEDERAL ASTM STANDARD</u></b>            |                    |                               |       |           |           |         |     |                  |
| NPL                                            |                    | 1.250                         | 0     | 0         | 0         | 0       | 0   | 0                |
| Proposed NPL                                   |                    | 1.250                         | 0     | 0         | 0         | 0       | 0   | 0                |
| CERCLIS                                        |                    | 0.750                         | 0     | 0         | 0         | 0       | NR  | 0                |
| CERC-NFRAP                                     |                    | 0.500                         | 0     | 0         | 0         | NR      | NR  | 0                |
| CORRACTS                                       |                    | 1.250                         | 0     | 0         | 0         | 0       | 0   | 0                |
| RCRIS-TSD                                      |                    | 0.750                         | 0     | 0         | 0         | 0       | NR  | 0                |
| RCRIS Lg. Quan. Gen.                           |                    | 0.500                         | 0     | 0         | 0         | NR      | NR  | 0                |
| RCRIS Sm. Quan. Gen.                           |                    | 0.500                         | 0     | 0         | 0         | NR      | NR  | 0                |
| ERNS                                           |                    | 0.250                         | 0     | 7         | NR        | NR      | NR  | 7                |
| <b><u>STATE ASTM STANDARD</u></b>              |                    |                               |       |           |           |         |     |                  |
| AWP                                            |                    | 1.250                         | 0     | 0         | 0         | 0       | 0   | 0                |
| Cal-Sites                                      |                    | 1.250                         | 0     | 0         | 0         | 0       | 0   | 0                |
| CHMIRS                                         |                    | 1.250                         | 0     | 4         | 0         | 1       | 0   | 5                |
| Cortese                                        |                    | 1.250                         | 0     | 0         | 3         | 6       | 6   | 15               |
| Notify 65                                      |                    | 1.250                         | 0     | 0         | 0         | 0       | 0   | 0                |
| Toxic Pits                                     |                    | 1.250                         | 0     | 0         | 0         | 0       | 0   | 0                |
| State Landfill                                 |                    | 0.750                         | 0     | 0         | 0         | 0       | NR  | 0                |
| WMUDS/SWAT                                     |                    | 0.750                         | 0     | 0         | 0         | 0       | NR  | 0                |
| LUST                                           |                    | 0.750                         | 0     | 0         | 4         | 8       | NR  | 12               |
| CA Bond Exp. Plan                              |                    | 1.250                         | 0     | 0         | 0         | 0       | 0   | 0                |
| UST                                            |                    | 0.500                         | 0     | 0         | 4         | NR      | NR  | 4                |
| VCP                                            |                    | 0.750                         | 0     | 0         | 0         | 0       | NR  | 0                |
| INDIAN UST                                     |                    | 0.500                         | 0     | 0         | 0         | NR      | NR  | 0                |
| CA FID UST                                     |                    | 0.500                         | 0     | 0         | 1         | NR      | NR  | 1                |
| HIST UST                                       |                    | 0.250                         | 0     | 1         | NR        | NR      | NR  | 1                |
| <b><u>FEDERAL ASTM SUPPLEMENTAL</u></b>        |                    |                               |       |           |           |         |     |                  |
| CONSENT                                        |                    | 1.000                         | 0     | 0         | 0         | 0       | NR  | 0                |
| ROD                                            |                    | 1.000                         | 0     | 0         | 0         | 0       | NR  | 0                |
| Delisted NPL                                   |                    | 1.000                         | 0     | 0         | 0         | 0       | NR  | 0                |
| FINDS                                          | TP                 |                               | NR    | NR        | NR        | NR      | NR  | 0                |
| HMIRS                                          | TP                 |                               | NR    | NR        | NR        | NR      | NR  | 0                |
| MLTS                                           | TP                 |                               | NR    | NR        | NR        | NR      | NR  | 0                |
| MINES                                          |                    | 0.250                         | 0     | 0         | NR        | NR      | NR  | 0                |
| NPL Liens                                      | TP                 |                               | NR    | NR        | NR        | NR      | NR  | 0                |
| PADS                                           | TP                 |                               | NR    | NR        | NR        | NR      | NR  | 0                |
| DOD                                            |                    | 1.000                         | 0     | 0         | 0         | 0       | NR  | 0                |
| US BROWNFIELDS                                 |                    | 0.500                         | 0     | 0         | 0         | NR      | NR  | 0                |
| RAATS                                          | TP                 |                               | NR    | NR        | NR        | NR      | NR  | 0                |
| TRIS                                           | TP                 |                               | NR    | NR        | NR        | NR      | NR  | 0                |
| TSCA                                           | TP                 |                               | NR    | NR        | NR        | NR      | NR  | 0                |
| SSTS                                           | TP                 |                               | NR    | NR        | NR        | NR      | NR  | 0                |
| FTTS                                           | TP                 |                               | NR    | NR        | NR        | NR      | NR  | 0                |
| <b><u>STATE OR LOCAL ASTM SUPPLEMENTAL</u></b> |                    |                               |       |           |           |         |     |                  |
| AST                                            | TP                 |                               | NR    | NR        | NR        | NR      | NR  | 0                |

### MAP FINDINGS SUMMARY

| Database | Target<br>Property | Search<br>Distance<br>(Miles) | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total<br>Plotted |
|----------|--------------------|-------------------------------|-------|-----------|-----------|---------|-----|------------------|
| CLEANERS |                    | 0.250                         | 0     | 0         | NR        | NR      | NR  | 0                |
| CA WDS   | TP                 |                               | NR    | NR        | NR        | NR      | NR  | 0                |
| DEED     | TP                 |                               | NR    | NR        | NR        | NR      | NR  | 0                |
| NFA      |                    | 0.250                         | 0     | 0         | NR        | NR      | NR  | 0                |
| EMI      | TP                 |                               | NR    | NR        | NR        | NR      | NR  | 0                |
| REF      |                    | 0.250                         | 0     | 0         | NR        | NR      | NR  | 0                |
| SCH      |                    | 0.250                         | 0     | 0         | NR        | NR      | NR  | 0                |
| NFE      |                    | 0.250                         | 0     | 0         | NR        | NR      | NR  | 0                |
| CA SLIC  |                    | 0.500                         | 0     | 0         | 0         | NR      | NR  | 0                |
| HAZNET   |                    | 0.250                         | 0     | 1         | NR        | NR      | NR  | 1                |

#### EDR PROPRIETARY HISTORICAL DATABASES

|                           |  |       |   |   |    |    |    |   |
|---------------------------|--|-------|---|---|----|----|----|---|
| Gas Stations/Dry Cleaners |  | 0.250 | 0 | 0 | NR | NR | NR | 0 |
| Coal Gas                  |  | 1.000 | 0 | 0 | 0  | 1  | NR | 1 |

#### BROWNFIELDS DATABASES

|                |  |       |   |   |   |    |    |   |
|----------------|--|-------|---|---|---|----|----|---|
| US BROWNFIELDS |  | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| VCP            |  | 0.750 | 0 | 0 | 0 | 0  | NR | 0 |

#### NOTES:

See the EDR Proprietary Historical Database Section for details

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

## MAP FINDINGS

Database(s)

EDR ID Number  
EPA ID Number

A1 LINO GUIDICI  
SSW 999 PRATT AVE  
1/8-1/4 SAINT HELENA, CA 94574  
765 ft.

HIST UST U001598317  
N/A

## Site 1 of 12 In cluster A

Relative:  
Higher

## UST HIST:

Actual:  
261 ft.

Facility ID: 59648  
Total Tanks: 1  
Owner Name: LINO GUIDICI  
Owner Address: 999 PRATT AVE.  
SAINT HELENA, CA 94574

Facility Status: Not reported  
Region: STATE  
Box Number: Not reported

A2  
SSW 1000 PRATT AVE.  
1/8-1/4 SAINT HELENA, CA 02903  
776 ft.

CHMIRS S105670184  
N/A

## Site 2 of 12 In cluster A

Relative:  
Higher

## CHMIRS:

Actual:  
261 ft.

OES Control Number: 02-6990  
Chemical Name: Cabernet Wine  
Extent of Release: Not reported  
Property Use: Not reported  
Incident Date: Not reported  
Date Completed: Not reported  
Time Completed : Not reported  
Agency Id Number : Not reported  
Agency Incident Number : Not reported  
OES Incident Number : 02-6990  
Time Notified : Not reported  
Surrounding Area : Not reported  
Estimated Temperature : Not reported  
Property Management : Not reported  
More Than Two Substances Involved? : Not reported  
Special Studies 1 : Not reported  
Special Studies 2 : Not reported  
Special Studies 3 : Not reported  
Special Studies 4 : Not reported  
Special Studies 5 : Not reported  
Special Studies 6 : Not reported  
Responding Agency Personnel # Of Injuries : 0  
Responding Agency Personnel # Of Fatalities : 0  
Resp Agency Personnel # Of Decontaminated : Not reported  
Others Number Of Decontaminated : Not reported  
Others Number Of Injuries : Not reported  
Others Number Of Fatalities : Not reported  
Vehicle Make/year : Not reported  
Vehicle License Number : Not reported  
Vehicle State : Not reported  
Vehicle Id Number : Not reported  
CA/DOT/PUC/ICC Number : Not reported  
Company Name : Not reported  
Reporting Officer Name/ID : Not reported  
Report Date : Not reported  
Comments : Not reported  
Facility Telephone Number : Not reported  
Waterway Involved : Yes  
Waterway : York Creek  
Spill Site : Merchant/Business  
Cleanup By : Reporting Party

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation Site

## MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

(Continued)

S105670184

Containment : Yes  
What Happened : Release was discovered this morning coming out of a partially opened valve.  
Type : Gal(s)  
Other : Not reported  
Chemical 1 : Not Reported  
Chemical 2 : Not Reported  
Chemical 3 : Not Reported  
Date/Time : 12/23/2002 0001  
Evacuations : 0  
OES Control Number: 01-7036  
Chemical Name: Treated winery waste water  
Extent of Release: Not reported  
Property Use: Not reported  
Incident Date: Not reported  
Date Completed: Not reported  
Time Completed : Not reported  
Agency Id Number : Not reported  
Agency Incident Number : Not reported  
OES Incident Number : 01-7036  
Time Notified : Not reported  
Surrounding Area : Not reported  
Estimated Temperature : Not reported  
Property Management : Not reported  
More Than Two Substances Involved? : Not reported  
Special Studies 1 : Not reported  
Special Studies 2 : Not reported  
Special Studies 3 : Not reported  
Special Studies 4 : Not reported  
Special Studies 5 : Not reported  
Special Studies 6 : Not reported  
Responding Agency Personnel # Of Injuries : 0  
Responding Agency Personnel # Of Fatalities : 0  
Resp Agency Personnel # Of Decontaminated : Not reported  
Others Number Of Decontaminated : Not reported  
Others Number Of Injuries : Not reported  
Others Number Of Fatalities : Not reported  
Vehicle Make/year : Not reported  
Vehicle License Number : Not reported  
Vehicle State : Not reported  
Vehicle Id Number : Not reported  
CA/DOT/PUC/ICC Number : Not reported  
Company Name : Not reported  
Reporting Officer Name/ID : Not reported  
Report Date : Not reported  
Comments : Not reported  
Facility Telephone Number : Not reported  
Waterway Involved : Yes  
Waterway : York Creek  
Spill Site : Other  
Cleanup By : Unknown  
Containment : Yes  
What Happened : RP's neighbor advised her of physical failure of the dike which caused this release. The fluids flowed into York Creek which feeds into the Napa River. The Napa River is not believed to be a source of drinking water. Samples have been taken to determine



Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s)  
EDR ID Number  
EPA ID Number

(Continued)

S105670184

Type : CHEMICAL  
Other : Not reported  
Chemical 1 : Not Reported  
Chemical 2 : Not Reported  
Chemical 3 : Not Reported  
Date/Time : 12/4/01 1515  
Evacuations : 0

A3 1000 PRATT AVE  
SSW 1000 PRATT AVE  
1/8-1/4 ST. HELENA, CA 94574  
776 ft.

ERNS 93338307  
N/A

Site 3 of 12 in cluster A

Relative:  
Higher

The ERNS database may contain additional details for this site.  
Please click here or contact your EDR Account Executive for more information.

Actual:  
261 ft.

A4 1000 PRATT AVENUE  
SSW 1000 PRATT AVENUE  
1/8-1/4 ST. HELENA, CA 94574  
776 ft.

ERNS 91466561  
N/A

Site 4 of 12 in cluster A

Relative:  
Higher

The ERNS database may contain additional details for this site.  
Please click here or contact your EDR Account Executive for more information.

Actual:  
261 ft.

A5 1000 PRATT AVE  
SSW 1000 PRATT AVE  
1/8-1/4 ST. HELENA, CA 94574  
776 ft.

ERNS 93319779  
N/A

Site 5 of 12 in cluster A

Relative:  
Higher

The ERNS database may contain additional details for this site.  
Please click here or contact your EDR Account Executive for more information.

Actual:  
261 ft.

A6 BERINGER VINEYARDS  
SSW 1000 PRATT AVE  
1/8-1/4 ST. HELENA, CA 94574  
776 ft.

HAZNET 1000593014  
N/A

Site 6 of 12 in cluster A

Relative:  
Higher

HAZNET:  
Gepaid: CAL000049240  
TSD EPA ID: CAT080014079  
Gen County: Napa  
Tsd County: 7  
Tons: 5.0275  
Waste Category: Off-specification, aged, or surplus organics  
Disposal Method: Transfer Station  
Contact: BERINGER WINE ESTATES  
Telephone: (707) 963-7115  
Mailing Address: PO BOX 111  
SAINT HELENA, CA 94574 - 0111  
County Napa

Actual:  
261 ft.

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s)  
EDR ID Number  
EPA ID Number

BERINGER VINEYARDS (Continued)

1000593014

Gepaid: CAL000049240  
TSD EPA ID: CAT080014079  
Gen County: Napa  
Tsd County: 7  
Tons: .3500  
Waste Category: Laboratory waste chemicals  
Disposal Method: Transfer Station  
Contact: BERINGER WINE ESTATES  
Telephone: (707) 963-7115  
Mailing Address: PO BOX 111  
SAINT HELENA, CA 94574 - 0111  
County: Napa

Gepaid: CAL000049240  
TSD EPA ID: CAT080014079  
Gen County: Napa  
Tsd County: 7  
Tons: .0030  
Waste Category: Other organic solids  
Disposal Method: Transfer Station  
Contact: BERINGER WINE ESTATES  
Telephone: (707) 963-7115  
Mailing Address: PO BOX 111  
SAINT HELENA, CA 94574 - 0111  
County: Napa

Gepaid: CAL000049240  
TSD EPA ID: CAT080014079  
Gen County: Napa  
Tsd County: 7  
Tons: 2.3350  
Waste Category: Off-specification, aged, or surplus inorganics  
Disposal Method: Transfer Station  
Contact: BERINGER WINE ESTATES  
Telephone: (707) 963-7115  
Mailing Address: PO BOX 111  
SAINT HELENA, CA 94574 - 0111  
County: Napa

Gepaid: CAL000049240  
TSD EPA ID: CAD980884183  
Gen County: Napa  
Tsd County: Sacramento  
Tons: .1850  
Waste Category: Off-specification, aged, or surplus organics  
Disposal Method: Transfer Station  
Contact: BERINGER WINE ESTATES  
Telephone: (707) 963-7115  
Mailing Address: PO BOX 111  
SAINT HELENA, CA 94574 - 0111  
County: Napa

The CA HAZNET database contains 7 additional records for this site.  
Please click [here](#) or contact your EDR Account Executive for more information.

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site                                                                                                                                             | Database(s) | EDR ID Number<br>EPA ID Number |
|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------------|
| BERINGER VINEYARDS (Continued)                                 |                                                                                                                                                  |             | 1000593014                     |
| A7<br>SSW<br>1/8-1/4<br>776 ft.                                | 1000 PRATT AVENUE<br>1000 PRATT AVENUE<br>ST. HELENA, CA                                                                                         | ERNS        | 91209327<br>N/A                |
| Site 7 of 12 in cluster A                                      |                                                                                                                                                  |             |                                |
| Relative:<br>Higher                                            | The ERNS database may contain additional details for this site.<br>Please click here or contact your EDR Account Executive for more information. |             |                                |
| Actual:<br>261 ft.                                             |                                                                                                                                                  |             |                                |
| A8<br>SSW<br>1/8-1/4<br>776 ft.                                | 1000 PRATT AV<br>SAINT HELENA, CA 29038                                                                                                          | CHMIRS      | S105661872<br>N/A              |
| Site 8 of 12 in cluster A                                      |                                                                                                                                                  |             |                                |
| Relative:<br>Higher                                            | CHMIRS:                                                                                                                                          |             |                                |
| Actual:<br>261 ft.                                             | OES Control Number: 99-1845                                                                                                                      |             |                                |
|                                                                | Chemical Name: Mercury                                                                                                                           |             |                                |
|                                                                | Extent of Release: Not reported                                                                                                                  |             |                                |
|                                                                | Property Use: Not reported                                                                                                                       |             |                                |
|                                                                | Incident Date: Not reported                                                                                                                      |             |                                |
|                                                                | Date Completed: Not reported                                                                                                                     |             |                                |
|                                                                | Time Completed : Not reported                                                                                                                    |             |                                |
|                                                                | Agency Id Number : Not reported                                                                                                                  |             |                                |
|                                                                | Agency Incident Number : Not reported                                                                                                            |             |                                |
|                                                                | OES Incident Number : 99-1845                                                                                                                    |             |                                |
|                                                                | Time Notified : Not reported                                                                                                                     |             |                                |
|                                                                | Surrounding Area : Not reported                                                                                                                  |             |                                |
|                                                                | Estimated Temperature : Not reported                                                                                                             |             |                                |
|                                                                | Property Management : Not reported                                                                                                               |             |                                |
|                                                                | More Than Two Substances Involved? : Not reported                                                                                                |             |                                |
|                                                                | Special Studies 1 : Not reported                                                                                                                 |             |                                |
|                                                                | Special Studies 2 : Not reported                                                                                                                 |             |                                |
|                                                                | Special Studies 3 : Not reported                                                                                                                 |             |                                |
|                                                                | Special Studies 4 : Not reported                                                                                                                 |             |                                |
|                                                                | Special Studies 5 : Not reported                                                                                                                 |             |                                |
|                                                                | Special Studies 6 : Not reported                                                                                                                 |             |                                |
|                                                                | Responding Agency Personnel # Of Injuries : 0                                                                                                    |             |                                |
|                                                                | Responding Agency Personnel # Of Fatalities : 0                                                                                                  |             |                                |
|                                                                | Resp Agency Personnel # Of Decontaminated : Not reported                                                                                         |             |                                |
|                                                                | Others Number Of Decontaminated : Not reported                                                                                                   |             |                                |
|                                                                | Others Number Of Injuries : Not reported                                                                                                         |             |                                |
|                                                                | Others Number Of Fatalities : Not reported                                                                                                       |             |                                |
|                                                                | Vehicle Make/year : Not reported                                                                                                                 |             |                                |
|                                                                | Vehicle License Number : Not reported                                                                                                            |             |                                |
|                                                                | Vehicle State : Not reported                                                                                                                     |             |                                |
|                                                                | Vehicle Id Number : Not reported                                                                                                                 |             |                                |
|                                                                | CA/DOT/PUC/ICC Number : Not reported                                                                                                             |             |                                |
|                                                                | Company Name : Not reported                                                                                                                      |             |                                |
|                                                                | Reporting Officer Name/ID : Not reported                                                                                                         |             |                                |
|                                                                | Report Date : Not reported                                                                                                                       |             |                                |
|                                                                | Comments : Not reported                                                                                                                          |             |                                |
|                                                                | Facility Telephone Number : Not reported                                                                                                         |             |                                |
|                                                                | Waterway Involved : No                                                                                                                           |             |                                |
|                                                                | Waterway : Not reported                                                                                                                          |             |                                |
|                                                                | Spill Site : Industrial Plant                                                                                                                    |             |                                |
|                                                                | Cleanup By : Reporting Party                                                                                                                     |             |                                |

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

\\(Continued\\)

S105661872

Containment : Yes  
What Happened : Cutting through a temperature probe, unaware of mercury content until it spilled.  
Type : CHEMICAL  
Other : Not reported  
Chemical 1 : Not Reported  
Chemical 2 : Not Reported  
Chemical 3 : Not Reported  
Date/Time : 4/27/99 1100  
Evacuations : 0

A9  
SSW  
1/8-1/4  
776 ft.

1000 PRATT AVE  
SAINT HELENA, CA 0

CHMIRS S105654932  
N/A

Site 9 of 12 in cluster A

Relative:  
Higher

CHMIRS:

Actual:  
261 ft.

OES Control Number: 00-6036  
Chemical Name: waste water  
Extent of Release: Not reported  
Property Use: Not reported  
Incident Date: Not reported  
Date Completed: Not reported  
Time Completed : Not reported  
Agency Id Number : Not reported  
Agency Incident Number : Not reported  
OES Incident Number : 00-6036  
Time Notified : Not reported  
Surrounding Area : Not reported  
Estimated Temperature : Not reported  
Property Management : Not reported  
More Than Two Substances Involved? : Not reported  
Special Studies 1 : Not reported  
Special Studies 2 : Not reported  
Special Studies 3 : Not reported  
Special Studies 4 : Not reported  
Special Studies 5 : Not reported  
Special Studies 6 : Not reported  
Responding Agency Personnel # Of Injuries : 0  
Responding Agency Personnel # Of Fatalities : 0  
Resp Agency Personnel # Of Decontaminated : Not reported  
Others Number Of Decontaminated : Not reported  
Others Number Of Injuries : Not reported  
Others Number Of Fatalities : Not reported  
Vehicle Make/year : Not reported  
Vehicle License Number : Not reported  
Vehicle State : Not reported  
Vehicle Id Number : Not reported  
CA/DOT/PUC/ICC Number : Not reported  
Company Name : Not reported  
Reporting Officer Name/ID : Not reported  
Report Date : Not reported  
Comments : Not reported  
Facility Telephone Number : Not reported  
Waterway Involved : Yes  
Waterway : York Creek  
Spill Site : Merchant/Business  
Cleanup By : Reporting Party

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

(Continued)

S105654932

Containment : No  
What Happened : a pump failed and overflowed the catch basin which went to a creek  
Type : OTHER  
Other : from wine processing  
Chemical 1 : Not Reported  
Chemical 2 : Not Reported  
Chemical 3 : Not Reported  
Date/Time : 12/19/00 815  
Evacuations : 0  
OES Control Number: 98-3634  
Chemical Name: Ammonia  
Extent of Release: Not reported  
Property Use: Not reported  
Incident Date: Not reported  
Date Completed: Not reported  
Time Completed : Not reported  
Agency Id Number : Not reported  
Agency Incident Number : Not reported  
OES Incident Number : 98-3634  
Time Notified : Not reported  
Surrounding Area : Not reported  
Estimated Temperature : Not reported  
Property Management : Not reported  
More Than Two Substances Involved? : Not reported  
Special Studies 1 : Not reported  
Special Studies 2 : Not reported  
Special Studies 3 : Not reported  
Special Studies 4 : Not reported  
Special Studies 5 : Not reported  
Special Studies 6 : Not reported  
Responding Agency Personnel # Of Injuries : 0  
Responding Agency Personnel # Of Fatalities : 0  
Resp Agency Personnel # Of Decontaminated : Not reported  
Others Number Of Decontaminated : Not reported  
Others Number Of Injuries : Not reported  
Others Number Of Fatalities : Not reported  
Vehicle Make/year : Not reported  
Vehicle License Number : Not reported  
Vehicle State : Not reported  
Vehicle Id Number : Not reported  
CA/DOT/PUC/ICC Number : Not reported  
Company Name : Not reported  
Reporting Officer Name/ID : Not reported  
Report Date : Not reported  
Comments : Not reported  
Facility Telephone Number : Not reported  
Waterway Involved : No  
Waterway : Not reported  
Spill Site : Other  
Cleanup By : Responsible Party  
Containment : Yes  
What Happened : Pressure relief valve failed. System shut down. Substance contained within system. There is a possibly the sewage made it to the wineries ponds. They will check and advise.  
Type : CHEMICAL  
Other : liquid/gas

| Map ID        | Direction                                                                                                                                        | Distance                             | Distance (ft.)     | Elevation     | Site                   | Database(s) | EDR ID Number | EPA ID Number |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|--------------------|---------------|------------------------|-------------|---------------|---------------|
| MAP FINDINGS  |                                                                                                                                                  |                                      |                    |               |                        |             |               |               |
| \ (Continued) |                                                                                                                                                  |                                      |                    |               |                        |             | S105654932    |               |
| Chemical 1 :  |                                                                                                                                                  | Not Reported                         |                    |               |                        |             |               |               |
| Chemical 2 :  |                                                                                                                                                  | Not Reported                         |                    |               |                        |             |               |               |
| Chemical 3 :  |                                                                                                                                                  | Not Reported                         |                    |               |                        |             |               |               |
| Date/Time :   |                                                                                                                                                  | 8/9/98                               |                    |               |                        |             |               |               |
| Evacuations : |                                                                                                                                                  | 0                                    |                    |               |                        |             |               |               |
| A10           | SSW                                                                                                                                              | 1000 PRATT AVE                       | 1000 PRATT AVE     | 1/8-1/4       | ST. HELENA, CA 94574   | ERNS        | 98449690      | N/A           |
| 776 ft.       | Site 10 of 12 in cluster A                                                                                                                       |                                      |                    |               |                        |             |               |               |
| Relative:     |                                                                                                                                                  |                                      |                    |               |                        |             |               |               |
| Higher        | The ERNS database may contain additional details for this site.<br>Please click here or contact your EDR Account Executive for more information. |                                      |                    |               |                        |             |               |               |
| Actual:       |                                                                                                                                                  |                                      |                    |               |                        |             |               |               |
| 261 ft.       |                                                                                                                                                  |                                      |                    |               |                        |             |               |               |
| A11           | SSW                                                                                                                                              | 1000 PRATT AVE                       | 1000 PRATT AVE     | 1/8-1/4       | ST. HELENA, CA 94574   | ERNS        | 99619491      | N/A           |
| 776 ft.       | Site 11 of 12 in cluster A                                                                                                                       |                                      |                    |               |                        |             |               |               |
| Relative:     |                                                                                                                                                  |                                      |                    |               |                        |             |               |               |
| Higher        | The ERNS database may contain additional details for this site.<br>Please click here or contact your EDR Account Executive for more information. |                                      |                    |               |                        |             |               |               |
| Actual:       |                                                                                                                                                  |                                      |                    |               |                        |             |               |               |
| 261 ft.       |                                                                                                                                                  |                                      |                    |               |                        |             |               |               |
| A12           | SSW                                                                                                                                              | 1000 PRATT AVE                       | 1000 PRATT AVE     | 1/8-1/4       | SAINT HELENA, CA 94574 | ERNS        | 91215345      | N/A           |
| 776 ft.       | Site 12 of 12 in cluster A                                                                                                                       |                                      |                    |               |                        |             |               |               |
| Relative:     |                                                                                                                                                  |                                      |                    |               |                        |             |               |               |
| Higher        | The ERNS database may contain additional details for this site.<br>Please click here or contact your EDR Account Executive for more information. |                                      |                    |               |                        |             |               |               |
| Actual:       |                                                                                                                                                  |                                      |                    |               |                        |             |               |               |
| 261 ft.       |                                                                                                                                                  |                                      |                    |               |                        |             |               |               |
| 13            | SW                                                                                                                                               | 1000 PRATTE AVENUE                   | 1000 PRATTE AVENUE | 1/8-1/4       | ST. HELENA, CA 94574   | CHMIRS      | S100277438    | N/A           |
| 1134 ft.      |                                                                                                                                                  |                                      |                    |               |                        |             |               |               |
| Relative:     | CHMIRS:                                                                                                                                          |                                      |                    |               |                        |             |               |               |
| Higher        | OES Control Number: 9116262                                                                                                                      |                                      |                    |               |                        |             |               |               |
|               |                                                                                                                                                  | Chemical Name:                       |                    | Not reported  |                        |             |               |               |
|               |                                                                                                                                                  | Extent of Release:                   |                    | Not reported  |                        |             |               |               |
|               |                                                                                                                                                  | Property Use:                        |                    | Manufacturing |                        |             |               |               |
|               |                                                                                                                                                  | Incident Date:                       |                    | 03-APR-91     |                        |             |               |               |
|               |                                                                                                                                                  | Date Completed:                      |                    | 03-APR-91     |                        |             |               |               |
|               |                                                                                                                                                  | Time Completed :                     |                    | 2340          |                        |             |               |               |
|               |                                                                                                                                                  | Agency Id Number :                   |                    | 28724         |                        |             |               |               |
|               |                                                                                                                                                  | Agency Incident Number :             |                    | HF 161        |                        |             |               |               |
|               |                                                                                                                                                  | OES Incident Number :                |                    | 9116262       |                        |             |               |               |
|               |                                                                                                                                                  | Time Notified :                      |                    | 2250          |                        |             |               |               |
|               |                                                                                                                                                  | Surrounding Area :                   |                    | 500           |                        |             |               |               |
|               |                                                                                                                                                  | Estimated Temperature :              |                    | 50            |                        |             |               |               |
|               |                                                                                                                                                  | Property Management :                |                    | P             |                        |             |               |               |
|               |                                                                                                                                                  | More Than Two Substances Involved? : |                    | N             |                        |             |               |               |
|               |                                                                                                                                                  | Special Studies 1 :                  |                    | Not reported  |                        |             |               |               |
|               |                                                                                                                                                  | Special Studies 2 :                  |                    | Not reported  |                        |             |               |               |

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

(Continued)

S100277438

Special Studies 3 : Not reported  
Special Studies 4 : Not reported  
Special Studies 5 : Not reported  
Special Studies 6 : Not reported  
Responding Agency Personnel # Of Injuries : 0  
Responding Agency Personnel # Of Fatalities : 0  
Resp Agency Personnel # Of Decontaminated : 0  
Others Number Of Decontaminated : 0  
Others Number Of Injuries : 0  
Others Number Of Fatalities : 0  
Vehicle Make/year : Not reported  
Vehicle License Number : Not reported  
Vehicle State : Not reported  
Vehicle Id Number : Not reported  
CA/DOT/PUC/ICC Number : Not reported  
Company Name : Not reported  
Reporting Officer Name/ID : JAQUELINE BERTAINA  
Report Date : 04-APR-91  
Comments : Yes  
Facility Telephone Number : 707 253-4269  
Waterway Involved : Not reported  
Waterway : Not reported  
Spill Site : Not reported  
Cleanup By : Not reported  
Containment : Not reported  
What Happened : Not reported  
Type : Not reported  
Other : Not reported  
Chemical 1 : Not Reported  
Chemical 2 : Not Reported  
Chemical 3 : Not Reported  
Date/Time : Not reported  
Evacuations : Not reported

14 BERINGER VINEYARDS  
SW 2000 MAIN ST  
1/4-1/2 ST HELENA, CA 94574  
1646 ft.

UST U003114822  
LUST N/A  
Cortese

Relative:  
Higher

State LUST:

Actual:  
278 ft.

Cross Street: Not reported  
Qty Leaked: Not reported  
Case Number 28-0019  
Reg Board: 2  
Chemical: Misc. Motor Vehicle Fuels  
Lead Agency: Regional Board  
Local Agency : 0  
Case Type: Undefined  
Status: Case Closed  
Abate Method: No Action Taken - no action has as yet been taken at the site  
Review Date: 02/02/1996 Confirm Leak: 02/02/1996  
Workplan: Not reported Prelim Assess: Not reported  
Pollution Char: Not reported Remed Plan: Not reported  
Remed Action: Not reported  
Monitoring: Not reported  
Close Date: 06/27/1997  
Release Date: 08/23/1989  
Cleanup Fund Id : Not reported  
Discover Date : 08/23/1989

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s)  
EDR ID Number  
EPA ID Number

BERINGER VINEYARDS (Continued)

U003114822

Enforcement Dt : Not reported  
Enf Type: Not reported  
Enter Date : 09/14/1989  
Funding: Federal Funds  
Staff Initials: ZZZ  
How Discovered: Tank Closure  
How Stopped: Not reported  
Interim : No  
Leak Cause: Structure Failure  
Leak Source: Tank  
MTBE Date : / /  
Max MTBE GW : 0 Parts per Billion  
MTBE Tested: Not Required to be Tested.  
Priority: Not reported  
Local Case # : 28-0019  
Beneficial: Not reported  
Staff : MRC  
GW Qualifier : Not reported  
Max MTBE Soil : Not reported  
Soil Qualifier : Not reported  
Hydr Basin # : Not reported  
Operator : Not reported  
Oversight Prgm: RB Lead Underground Storage Tank  
Oversight Prgm : UST  
Review Date : 07/29/1997  
Stop Date : 08/23/1989  
Work Suspended :No  
Responsible Party:BLANK RP  
RP Address: Not reported  
Global Id: T0605500018  
Org Name: Not reported  
Contact Person: Not reported  
MTBE Conc: 0  
Mtbe Fuel: 0  
Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported

LUST Region 2:

Region: 2  
Case Number: T0605500018  
Facility Id: 28-0019  
Entered Date: 09/14/1989  
Facility Status: Case Closed  
Maximum Soil Concentration: 0  
Maximum Groundwater Impact: 0  
County : Napa  
Current Benzene: Not reported  
MTBE Detected in GW: Not reported  
MTBE Detected in Soil: Not reported  
MTBE: 0  
MTBE Qualify: Not reported

CORTESE:

Region: CORTESE  
Fac Address 2: 2000 MAIN ST



Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s)  
EDR ID Number  
EPA ID Number

BERINGER VINEYARDS \Continued\

U003114822

UST Napa County:  
Facility ID: NAPA0020 Num of Tanks: 0  
Region: NAPA

B15 ABRUZZINI PROPERTY  
SSE 1030 FULTON LN  
1/4-1/2 ST HELENA, CA  
2007 ft.

LUST S104162284  
Cortese N/A

Site 1 of 6 in cluster B

Relative:  
Higher

Actual:  
255 ft.

State LUST:  
Cross Street: Not reported  
Qty Leaked: Not reported  
Case Number 28-0002  
Reg Board: 2  
Chemical: Gasoline  
Lead Agency: Local Agency  
Local Agency : 0  
Case Type: Soil only  
Status: Case Closed  
Abate Method: Excavate and Dispose - remove contaminated soil and dispose in approved site  
Review Date: Not reported  
Workplan: 8/8/90  
Pollution Char: Not reported  
Remed Action: Not reported  
Monitoring: Not reported  
Close Date: 05/15/1992  
Release Date: 04/02/1987  
Cleanup Fund Id : Not reported  
Discover Date : 04/02/1987  
Enforcement Dt : Not reported  
Enf Type: Not reported  
Enter Date : 04/02/1987  
Funding: Federal Funds  
Staff Initials: ZZZ  
How Discovered: Tank Closure  
How Stopped: Not reported  
Interim : Yes  
Leak Cause: Structure Failure  
Leak Source: Tank  
MTBE Date : / /  
Max MTBE GW : 0 Parts per Billion  
MTBE Tested: Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.  
Priority: Not reported  
Local Case # : 18  
Beneficial: Not reported  
Staff : MRC  
GW Qualifier : Not reported  
Max MTBE Soil : Not reported  
Soil Qualifier : Not reported  
Hydr Basin #: Not reported  
Operator : Not reported  
Oversight Prgm: Local Oversight Program UST  
Oversight Prgm : LOP  
Review Date : 08/10/1990  
Stop Date : 04/02/1987  
Work Suspended No

Confirm Leak: Not reported  
Prelim Assess: 8/8/90  
Remed Plan: Not reported

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s)  
EDR ID Number  
EPA ID Number

ABRUZZINI PROPERTY (Continued)

S104162284

Responsible Party: BLANK RP  
RP Address: Not reported  
Global Id: T0605500001  
Org Name: Not reported  
Contact Person: Not reported  
MTBE Conc: 0  
Mtbe Fuel: 1  
Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported

LUST Region 2:

Region: 2  
Case Number: T0605500001  
Facility Id: 28-0002  
Entered Date: 04/02/1987  
Facility Status: Case Closed  
Maximum Soil Concentration: 2885  
Maximum Groundwater Impact: 0  
County: Napa  
Current Benzene: Not reported  
MTBE Detected in GW: Not reported  
MTBE Detected in Soil: Not reported  
MTBE: 0  
MTBE Qualify: Not reported

CORTESE:

Region: CORTESE  
Fac Address 2: 1030 FULTON LN

B16 ABRUZZINI PROPERTY  
SSE 1030 FULTON LANE  
1/4-1/2 ST HELENA, CA 94574  
2007 ft.

LUST S105109539  
N/A

Site 2 of 6 in cluster B

Relative:  
Higher

LUST NAPA County:  
Facility ID: NAPA0018  
Region: NAPA  
Date Closed: 05/15/1992

Actual:  
255 ft.

B17 RON ABRUZZINI  
SSE 1030 FULTON LN  
1/4-1/2 ST HELENA, CA 94574  
2007 ft.

CA FID UST S101624086  
N/A

Site 3 of 6 in cluster B

Relative:  
Higher

Actual:  
255 ft.

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s)  
EDR ID Number  
EPA ID Number

RON ABRUZZINI (Continued)

S101624086

FID: Facility ID: 28000007 Regulate ID: 00054371  
Reg By: Inactive Underground Storage Tank Location  
Cortese Code: Not reported SIC Code: Not reported  
Status: Inactive Facility Tel: (707) 226-2674  
Mail To: Not reported  
1222 RIVER PARK BLVD  
ST HELENA, CA 94574  
Contact: Not reported Contact Tel: Not reported  
DUNs No: Not reported NPDES No: Not reported  
Creation: 10/22/93 Modified: 00/00/00  
EPA ID: Not reported  
Comments: Not reported

B18 ABRUZZINI PROPERTY  
SSE 1030 FULTON LANE  
1/4-1/2 ST HELENA, CA 94574  
2007 ft.

UST U001598334  
HIST UST N/A

Site 4 of 6 in cluster B

Relative:  
Higher

UST HIST:  
Facility ID: 54371 Facility Status: Not reported  
Total Tanks: 2 Region: STATE  
Owner Name: RON ABRUZZINI Box Number: Not reported  
Owner Address: 1222 RIVER PARK BLVD.  
NAPA, CA 94559

Actual:  
255 ft.

UST Napa County:  
Facility ID: NAPA0018 Num of Tanks: 0  
Region: NAPA

B19 HELEN PASCHICH ESTATE  
SSE 1078 FULTON LANE  
1/4-1/2 ST HELENA, CA 94574  
2138 ft.

UST U001596441  
LUST N/A  
Cortese  
HIST UST

Site 5 of 6 in cluster B

Relative:  
Higher

State LUST:  
Cross Street: Not reported  
Qty Leaked: Not reported  
Case Number: 28-0134  
Reg Board: 2  
Chemical: Misc. Motor Vehicle Fuels  
Lead Agency: Local Agency  
Local Agency: 0  
Case Type: Soil only  
Status: Case Closed  
Abate Method: Excavate and Treat - remove contaminated soil and treat (includes spreading or land farming)  
Review Date: Not reported Confirm Leak: Not reported  
Workplan: Not reported Prelim Assess: Not reported  
Pollution Char: Not reported Remed Plan: Not reported  
Remed Action: Not reported  
Monitoring: Not reported  
Close Date: 12/10/1992  
Release Date: 04/09/1990  
Cleanup Fund Id: Not reported  
Discover Date: 08/23/1989

Actual:  
258 ft.

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

HELEN PASCHICH ESTATE (Continued)

U001596441

Enforcement Dt : Not reported  
Enf Type: Not reported  
Enter Date : 09/14/1989  
Funding: Federal Funds  
Staff Initials: ZZZ  
How Discovered: Tank Closure  
How Stopped: Not reported  
Interim : Yes  
Leak Cause: Structure Failure  
Leak Source: Tank  
MTBE Date : / /  
Max MTBE GW : 0 Parts per Billion  
MTBE Tested: Not Required to be Tested.  
Priority: Not reported  
Local Case # : 200  
Beneficial: Not reported  
Staff : MRC  
GW Qualifier : Not reported  
Max MTBE Soil : Not reported  
Soil Qualifier : Not reported  
Hydr Basin # : Not reported  
Operator : Not reported  
Oversight Prgm: Local Oversight Program UST  
Oversight Prgm : LOP  
Review Date : 03/04/1993  
Stop Date : 08/23/1989  
Work Suspended :No  
Responsible Party:BLANK RP  
RP Address: Not reported  
Global Id: T0605500123  
Org Name: Not reported  
Contact Person: Not reported  
MTBE Conc: 0  
Mtbe Fuel: 0  
Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported

LUST Region 2:

Region: 2  
Case Number: T0605500123  
Facility Id: 28-0134  
Entered Date: 09/14/1989  
Facility Status: Case Closed  
Maximum Soil Concentration: 5  
Maximum Groundwater Impact: 0  
County : Napa  
Current Benzene: Not reported  
MTBE Detected in GW: Not reported  
MTBE Detected In Soil: Not reported  
MTBE: 0  
MTBE Qualify: Not reported

LUST NAPA County:

Facility ID: NAPA0200  
Region: NAPA

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

HELEN PASCHICH ESTATE (Continued)

EDR ID Number  
EPA ID Number

Database(s)

U001596441

Date Closed: 12/10/1992

CORTESE:

Region: CORTESE  
Fac Address 2: 1078 FULTON LN

UST HIST:

Facility ID: 48591 Facility Status: Not reported  
Total Tanks: 1 Region: STATE  
Owner Name: L.J. PASCHICH Box Number: Not reported  
Owner Address: 2130 PICKETT RD.  
CALISTOGA, CA 94515

UST Napa County:

Facility ID: NAPA0200 Num of Tanks: 0  
Region: NAPA

B20 NICHOLLS, FREEMAN  
SSE 1080 FULTON LN  
1/4-1/2 ST HELENA, CA 94574  
2144 ft.

UST U003114688  
N/A

Site 6 of 6 in cluster B

Relative:  
Higher

UST Napa County:  
Facility ID: NAPA0590 Num of Tanks: 0  
Region: NAPA

Actual:  
259 ft.

C21 ST HELENA POLICE DEPARTMENT  
SSE 1480 MAIN ST  
1/2-1 ST HELENA, CA 94574  
2854 ft.

LUST S102438003  
Cortese N/A

Site 1 of 2 in cluster C

Relative:  
Higher

State LUST:  
Cross Street: Not reported  
Qty Leaked: Not reported  
Case Number: 28-0210  
Reg Board: 2  
Chemical: Diesel  
Lead Agency: Local Agency  
Local Agency: 0  
Case Type: Undefined  
Status: Leak being confirmed  
Abate Method: No Action Taken - no action has as yet been taken at the site  
Review Date: 08/20/1996 Confirm Leak: 08/20/1996  
Workplan: Not reported Prelim Assess: Not reported  
Pollution Char: Not reported Remed Plan: Not reported  
Remed Action: Not reported  
Monitoring: Not reported  
Close Date: Not reported  
Release Date: 05/20/1991  
Cleanup Fund Id: Not reported  
Discover Date: 06/07/1991  
Enforcement Dt: Not reported  
Enf Type: Not reported  
Enter Date: 12/29/1992  
Funding: Federal Funds  
Staff Initials: JMC  
How Discovered: Tank Closure  
How Stopped: Not reported

Actual:  
258 ft.

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

ST HELENA POLICE DEPARTMENT (Continued)

S102438003

Interim : No  
Leak Cause: Structure Failure  
Leak Source: Tank  
MTBE Date : / /  
Max MTBE GW : 0 Parts per Billion  
MTBE Tested: Not Required to be Tested.  
Priority: Not reported  
Local Case # : 398  
Beneficial: Not reported  
Staff : MRC  
GW Qualifier : Not reported  
Max MTBE Soil : Not reported  
Soil Qualifier : Not reported  
Hydr Basin #: Not reported  
Operator : Not reported  
Oversight Prgm: Local Oversight Program UST  
Oversight Prgm : LOP  
Review Date : 08/20/1996  
Stop Date : 06/07/1991  
Work Suspended No  
Responsible Party: BLANK RP  
RP Address: Not reported  
Global Id: T0605500189  
Org Name: Not reported  
Contact Person: Not reported  
MTBE Conc: 0  
Mtb Fuel: 0  
Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported

LUST Region 2:

Region: 2  
Case Number: T0605500189  
Facility Id: 28-0210  
Entered Date: 12/29/1992  
Facility Status: Leak being confirmed  
Maximum Soil Concentration: 0  
Maximum Groundwater Impact: 0  
County : Napa  
Current Benzene: Not reported  
MTBE Detected in GW: Not reported  
MTBE Detected in Soil: Not reported  
MTBE: 0  
MTBE Qualify: Not reported

CORTESE:

Region: CORTESE  
Fac Address 2: Not reported

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s)

EDR ID Number  
EPA ID Number

**C22** ST. HELENA CITY POLICE DEPARTM  
**SSE** 1480 MAIN ST  
**1/2-1** SAINT HELENA, CA 94574  
**2854 ft.**

**UST** U003114820  
**LUST** N/A

Site 2 of 2 In cluster C

Relative:  
Higher

LUST NAPA County:

Facility ID: NAPA0398

Region: NAPA

Date Closed: / /

**Actual:**  
**258 ft.**

UST Napa County:

Facility ID: NAPA0398

Region: NAPA

Num of Tanks: 0

**23** GIN PROPERTY  
**NNE** 3473 ST HELENA HWY  
**1/2-1** ST HELENA, CA 94574  
**2939 ft.**

**LUST** S101299178  
N/A

Relative:  
Higher

State LUST:

Cross Street: Not reported

Qty Leaked: Not reported

Case Number 28-0226

Reg Board: 2

Chemical: Gasoline

Lead Agency: Regional Board

Local Agency : 0

Case Type: Soil only

Status: Leak being confirmed

Abate Method: Excavate and Treat - remove contaminated soil and treat (includes spreading or land farming)

Review Date: 03/26/1993

Workplan: Not reported

Pollution Char: Not reported

Remed Action: Not reported

Monitoring: Not reported

Close Date: Not reported

Release Date: 03/22/1993

Cleanup Fund Id : Not reported

Discover Date : 02/16/1993

Enforcement Dt : Not reported

Enf Type: DLLET

Enter Date : 03/25/1993

Funding: Federal Funds

Staff Initials: ZZZ

How Discovered: Tank Closure

How Stopped: Not reported

Interim : Yes

Leak Cause: Structure Failure

Leak Source: Tank

MTBE Date : / /

Max MTBE GW : 0 Parts per Billion

MTBE Tested: Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.

Priority: Not reported

Local Case # : 28-0226

Beneficial: Not reported

Staff : MRC

GW Qualifier : Not reported

Max MTBE Soil : Not reported

Soil Qualifier : Not reported

Confirm Leak: 03/26/1993

Prelim Assess: Not reported

Remed Plan: Not reported

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

GIN PROPERTY (Continued)

S101299178

Hydr Basin #: Not reported  
Operator : Not reported  
Oversight Prgm: RB Lead Underground Storage Tank  
Oversight Prgm : UST  
Review Date : 07/11/2001  
Stop Date : 02/16/1993  
Work Suspended :No  
Responsible Party:BLANK RP  
RP Address: Not reported  
Global Id: T0605591140  
Org Name: Not reported  
Contact Person: Not reported  
MTBE Conc: 0  
Mtbe Fuel: 1  
Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported

LUST Region 2:

Region: 2  
Case Number: T0605591140  
Facility Id: 28-0226  
Entered Date: 03/25/1993  
Facility Status: Leak being confirmed  
Maximum Soil Concentration: 170  
Maximum Groundwater Impact: 0  
County : Napa  
Current Benzene: Not reported  
MTBE Detected in GW: Not reported  
MTBE Detected in Soil: Not reported  
MTBE: 0  
MTBE Qualify: Not reported

24  
South  
1/2-1  
3103 ft.

JAEGER PROPERTY  
1665 SPRING MOUNTAIN RD  
ST HELENA, CA 94574

LUST S104165861  
Cortese N/A

Relative:  
Higher

State LUST:

Actual:  
284 ft.

Cross Street: Not reported  
Qty Leaked: Not reported  
Case Number 28-0079  
Reg Board: 2  
Chemical: Unleaded Gasoline  
Lead Agency: Regional Board  
Local Agency : 0  
Case Type: Undefined  
Status: Case Closed  
Abate Method: No Action Taken - no action has as yet been taken at the site  
Review Date: Not reported  
Workplan: Not reported  
Pollution Char: Not reported  
Remed Action: Not reported  
Monitoring: Not reported  
Close Date: 10/06/1995  
Release Date: 03/23/1989  
Cleanup Fund Id : Not reported  
Confirm Leak: Not reported  
Prelim Assess: Not reported  
Remed Plan: Not reported



Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

JAEGER PROPERTY (Continued)

S104165861

Discover Date : 03/23/1989  
Enforcement Dt : Not reported  
Enf Type: Not reported  
Enter Date : 08/08/1989  
Funding: Federal Funds  
Staff Initials: ZZZ  
How Discovered: Tank Closure  
How Stopped: Not reported  
Interim : No  
Leak Cause: Structure Failure  
Leak Source: Tank  
MTBE Date : / /  
Max MTBE GW : 0 Parts per Billion  
MTBE Tested: Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.  
Priority: Not reported  
Local Case # : 28-0079  
Beneficial: Not reported  
Staff : MRC  
GW Qualifier : Not reported  
Max MTBE Soil : Not reported  
Soil Qualifier : Not reported  
Hydr Basin #: Not reported  
Operator : Not reported  
Oversight Prgm: RB Lead Underground Storage Tank  
Oversight Prgm : UST  
Review Date : 10/06/1995  
Stop Date : 03/23/1989  
Work Suspended No  
Responsible Party:BLANK RP  
RP Address: Not reported  
Global Id: T0605500072  
Org Name: Not reported  
Contact Person: Not reported  
MTBE Conc: 0  
Mtbe Fuel: 1  
Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported

LUST Region 2:

Region: 2  
Case Number: T0605500072  
Facility Id: 28-0079  
Entered Date: 08/08/1989  
Facility Status: Case Closed  
Maximum Soil Concentration: 0  
Maximum Groundwater Impact: 0  
County : Napa  
Current Benzene: Not reported  
MTBE Detected in GW: Not reported  
MTBE Detected in Soil: Not reported  
MTBE: 0  
MTBE Qualify: Not reported

CORTESE:

Region: CORTESE

### MAP FINDINGS

Site

EDR ID Number  
EPA ID Number

**S104165861**

Fac Address 2: 1665 SPRING MOUNTAIN RD

UST U003114818  
LUST N/A

### Site 1 of 5 in cluster D

LUST NAPA County:

Facility ID: NAPA0255  
Region: NAPA  
Date Closed: / /

tate UST:

State UST:  
Facility ID: NAPA0255  
Region: STATE  
Local Agency: 28000

UST Napa County:

Facility ID: NAPA0255  
Region: NAPA

Num of Tanks: 2

|         |            |
|---------|------------|
| LUST    | S105030297 |
| Cortese | N/A        |

### Site 2 of 5 in cluster D

State LUST:

|                |                             |
|----------------|-----------------------------|
| Cross Street:  | Adams Street                |
| Qty Leaked:    | Not reported                |
| Case Number    | 28-0211                     |
| Reg Board:     | 2                           |
| Chemical:      | Waste Oil                   |
| Lead Agency:   | Local Agency                |
| Local Agency : | 0                           |
| Case Type:     | Other ground water affected |
| Status:        | No Action                   |

|               |              |
|---------------|--------------|
| Cross Street: | Adams Street |
| Qty Leaked:   | Not reported |
| Case Number   | 28-0211      |
| Reg Board:    | 2            |

|                |              |
|----------------|--------------|
| Chemical:      | Waste Oil    |
| Lead Agency:   | Local Agency |
| Local Agency : | 0            |

Local Agency : 0

Case Type: Other ground water affected

Status: No Action

Abate Method: No Action Taken - no action has as yet been taken at the site

|              |              |               |              |
|--------------|--------------|---------------|--------------|
| Review Date: | Not reported | Confirm Leak: | Not reported |
|--------------|--------------|---------------|--------------|

Workplan: 5/15/92 Prelim Assess: 5/15/92

|                 |              |             |              |
|-----------------|--------------|-------------|--------------|
| Workplan:       | 8/15/02      | Remed Plan: | Not reported |
| Pollution Char: | Not reported |             |              |

Remed Action: Not reported

Monitoring: Not reported

Monitoring: Not reported  
Close Date: Not reported

Close Date: Not Reported  
Release Date: 09/03/1991

Release Date: 09/03/1991  
Cleanup Fund Id : Not reported

Discover Date : 03/15/1997

Enforcement Dt : Not reported

Enf Type: Not reported

Ent Type: Not Reported  
Enter Date: 10/21/1991

Enter Date : 10/21/1991  
Funding: Federal Funds

Funding:  Fede  
Staff Initials:  JMC

Staff Initials: JMC  
How Discovered: Tank Closure

How Discovered: Tank Closure  
How Stopped: Not reported

|              |    |
|--------------|----|
| How Stopped: | No |
| Interim:     | No |

|             |                   |
|-------------|-------------------|
| Interim :   | No                |
| Loss Cause: | Structure Failure |

Leak Cause:               Struct  
Leak Source:           Tank

Leak Source: Tank  
MTBE Date: 09/10/2003

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

Site

MAP FINDINGS

Database(s)

EDR ID Number  
EPA ID Number

CHEVRON \ (Continued)

S105030297

Max MTBE GW : 6 Parts per Billion  
MTBE Tested: MTBE Detected. Site tested for MTBE & MTBE detected  
Priority: Not reported  
Local Case # : 255  
Beneficial: AGR, GWR, MUN, WILD  
Staff : MRC  
GW Qualifier : =  
Max MTBE Soil : 15 Parts per Million  
Soil Qualifier : Not reported  
Hydr Basin #: Not reported  
Operator : Not reported  
Oversight Prgm: Local Oversight Program UST  
Oversight Prgm : LOP  
Review Date : 07/25/2002  
Stop Date : 08/23/1991  
Work Suspended : No  
Responsible Party: BLANK RP  
RP Address: Not reported  
Global Id: T0605500190  
Org Name: Not reported  
Contact Person: Not reported  
MTBE Conc: 7  
Mtbe Fuel: 0  
Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported

LUST Region 2:

Region: 2  
Case Number: T0605500190  
Facility Id: 28-0211  
Entered Date: 10/21/1991  
Facility Status: Preliminary site assessment underway  
Maximum Soil Concentration: 160  
Maximum Groundwater Impact: 63000  
County : Napa  
Current Benzene: 10  
MTBE Detected in GW: 850  
MTBE Detected in Soil: 15  
MTBE: 240  
MTBE Qualify: =

CORTESE:

Region: CORTESE  
Fac Address 2: 1400 MAIN ST  
  
Region: CORTESE  
Fac Address 2: 1400 MAIN ST



Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

Site

MAP FINDINGS

Database(s)

EDR ID Number  
EPA ID Number

UNION 76 (Continued)

S102439588

Local Case # : 199  
Beneficial: GWR, PROC, IND, MUN, SPWN, REC-1, WILD  
Staff : MRC  
GW Qualifier : Not reported  
Max MTBE Soil : Not reported  
Soil Qualifier : Not reported  
Hydr Basin # : Not reported  
Operator : Not reported  
Oversight Prgm: Local Oversight Program UST  
Oversight Prgm : LOP  
Review Date : 02/26/2003  
Stop Date : 05/17/1989  
Work Suspended : No  
Responsible Party: BLANK RP  
RP Address: Not reported  
Global Id: T0605500159  
Org Name: Not reported  
Contact Person: Not reported  
MTBE Conc: 1  
Mtbe Fuel: 0  
Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported  
  
Cross Street: ADAMS ST  
Qty Leaked: Not reported  
Case Number : 28-0295  
Reg Board: 2  
Chemical: Gasoline  
Lead Agency: Local Agency  
Local Agency : 0  
Case Type: Other ground water affected  
Status: Leak being confirmed  
Review Date: 12/14/1998  
Workplan: Not reported  
Pollution Char: Not reported  
Remed Action: Not reported  
Monitoring: Not reported  
Close Date: Not reported  
Release Date: 12/14/1998  
Cleanup Fund Id : Not reported  
Discover Date : 12/14/1998  
Enforcement Dt : Not reported  
Enf Type: Not reported  
Enter Date : 01/15/1999  
Funding: Not reported  
Staff Initials: JMB  
How Discovered: Tank Closure  
How Stopped: Not reported  
Interim : Not reported  
Leak Cause: UNK  
Leak Source: UNK  
MTBE Date : 01/02/1965  
Max MTBE GW : 26000 Parts per Billion  
MTBE Tested: MTBE Detected. Site tested for MTBE & MTBE detected

Confirm Leak: 12/14/1998  
Prelim Assess: Not reported  
Remed Plan: Not reported

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

UNION 76 (Continued)

S102439588

Priority: Not reported  
Local Case #: 280295  
Beneficial: Not reported  
Staff: MRC  
GW Qualifier: Not reported  
Max MTBE Soil: Not reported  
Soil Qualifier: Not reported  
Hydr Basin #: Not reported  
Operator: Not reported  
Oversight Prgm: Local Oversight Program UST  
Oversight Prgm: LOP  
Review Date: 04/09/1999  
Stop Date: 12/14/1998  
Work Suspended: No  
Responsible Party: BLANK RP  
RP Address: Not reported  
Global Id: T0605500251  
Org Name: Not reported  
Contact Person: Not reported  
MTBE Conc: 1  
Mtbe Fuel: 1  
Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported

LUST Region 2:

Region: 2  
Case Number: T0605500159  
Facility Id: 28-0175  
Entered Date: 07/27/1989  
Facility Status: Post remedial action monitoring  
Maximum Soil Concentration: 230  
Maximum Groundwater Impact: 2600  
County: Napa  
Current Benzene: Not reported  
MTBE Detected in GW: 2600  
MTBE Detected in Soil: Not reported  
MTBE: 2600  
MTBE Qualify: Not reported  
Region: 2  
Case Number: T0605500251  
Facility Id: 28-0295  
Entered Date: 01/15/1999  
Facility Status: Leak being confirmed  
Maximum Soil Concentration: 0  
Maximum Groundwater Impact: 26000  
County: Napa  
Current Benzene: Not reported  
MTBE Detected in GW: 26000  
MTBE Detected in Soil: Not reported  
MTBE: 26000  
MTBE Qualify: Not reported

CORTESE:

Region: CORTESE  
Fac Address 2: 1380 MAIN ST

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

UNION 76 (Continued)

S102439588

Region: CORTESE  
Fac Address 2: 1380 MAIN ST

D29  
SSE 1354 MAIN ST.  
1/2-1 SAINT HELENA, CA 95401  
3482 ft.

CHMIRS S105883515  
N/A

Site 5 of 5 in cluster D

Relative:  
Higher

CHMIRS:

Actual:  
250 ft.

OES Control Number: 02-1785  
Chemical Name: Mineral Oil  
Extent of Release: Not reported  
Property Use: Not reported  
Incident Date: Not reported  
Date Completed: Not reported  
Time Completed : Not reported  
Agency Id Number : Not reported  
Agency Incident Number : Not reported  
OES Incident Number : 02-1785  
Time Notified : Not reported  
Surrounding Area : Not reported  
Estimated Temperature : Not reported  
Property Management : Not reported  
More Than Two Substances Involved? : Not reported  
Special Studies 1 : Not reported  
Special Studies 2 : Not reported  
Special Studies 3 : Not reported  
Special Studies 4 : Not reported  
Special Studies 5 : Not reported  
Special Studies 6 : Not reported  
Responding Agency Personnel # Of Injuries : 0  
Responding Agency Personnel # Of Fatalities : 0  
Resp Agency Personnel # Of Decontaminated : Not reported  
Others Number Of Decontaminated : Not reported  
Others Number Of Injuries : Not reported  
Others Number Of Fatalities : Not reported  
Vehicle Make/year : Not reported  
Vehicle License Number : Not reported  
Vehicle State : Not reported  
Vehicle Id Number : Not reported  
CA/DOT/PUC/ICC Number : Not reported  
Company Name : Not reported  
Reporting Officer Name/ID : Not reported  
Report Date : Not reported  
Comments : Not reported  
Facility Telephone Number : Not reported  
Waterway Involved : No  
Waterway : Not reported  
Spill Site : Road  
Cleanup By : Reporting Party  
Containment : Yes  
What Happened : A leak from transformer over a two day period.  
Type : Gal(s)  
Other : non pcb's  
Chemical 1 : Not Reported  
Chemical 2 : Not Reported  
Chemical 3 : Not Reported

| Map ID                                                                   | Direction | Distance | Distance (ft.) | Elevation | Site                   | Database(s)                                                   | EDR ID Number  | EPA ID Number |
|--------------------------------------------------------------------------|-----------|----------|----------------|-----------|------------------------|---------------------------------------------------------------|----------------|---------------|
| MAP FINDINGS                                                             |           |          |                |           |                        |                                                               |                |               |
| \\(Continued\\)                                                          |           |          |                |           |                        |                                                               | S105883515     |               |
| Date/Time :                                                              |           |          |                |           |                        | 3/30/2002 1230                                                |                |               |
| Evacuations :                                                            |           |          |                |           |                        | 0                                                             |                |               |
| 30                                                                       |           |          |                |           | PACIFIC BELL           | RCRIS-SQG                                                     | 1000251880     |               |
| SSE                                                                      |           |          |                |           | 1240 OAK STREET        | FINDS                                                         | CAT080029341   |               |
| 1/2-1                                                                    |           |          |                |           | SAINT HELENA, CA 94574 | LUST                                                          |                |               |
| 4070 ft.                                                                 |           |          |                |           |                        | Cortese                                                       |                |               |
|                                                                          |           |          |                |           |                        | HAZNET                                                        |                |               |
| Relative:                                                                |           |          |                |           | RCRIS:                 |                                                               |                |               |
| Lower                                                                    |           |          |                |           | Owner:                 | NOT REQUIRED                                                  |                |               |
|                                                                          |           |          |                |           |                        | \\(415\\) 555-1212                                            |                |               |
| Actual:                                                                  |           |          |                |           | EPA ID:                | CAT080029341                                                  |                |               |
| 244 ft.                                                                  |           |          |                |           | Contact:               | Not reported                                                  |                |               |
|                                                                          |           |          |                |           | Classification:        | Small Quantity Generator                                      |                |               |
|                                                                          |           |          |                |           | TSD Activities:        | Not reported                                                  |                |               |
|                                                                          |           |          |                |           | Violation Status:      | No violations found                                           |                |               |
| FINDS:                                                                   |           |          |                |           |                        |                                                               |                |               |
| Other Pertinent Environmental Activity Identified at Site:               |           |          |                |           |                        |                                                               |                |               |
| Facility Registry System \\(FRS\\)                                       |           |          |                |           |                        |                                                               |                |               |
| Resource Conservation and Recovery Act Information system \\(RCRAINFO\\) |           |          |                |           |                        |                                                               |                |               |
| State LUST:                                                              |           |          |                |           |                        |                                                               |                |               |
|                                                                          |           |          |                |           | Cross Street:          | Not reported                                                  |                |               |
|                                                                          |           |          |                |           | Qty Leaked:            | Not reported                                                  |                |               |
|                                                                          |           |          |                |           | Case Number            | 28-0128                                                       |                |               |
|                                                                          |           |          |                |           | Reg Board:             | 2                                                             |                |               |
|                                                                          |           |          |                |           | Chemical:              | Diesel                                                        |                |               |
|                                                                          |           |          |                |           | Lead Agency:           | Regional Board                                                |                |               |
|                                                                          |           |          |                |           | Local Agency :         | 0                                                             |                |               |
|                                                                          |           |          |                |           | Case Type:             | Other ground water affected                                   |                |               |
|                                                                          |           |          |                |           | Status:                | Case Closed                                                   |                |               |
|                                                                          |           |          |                |           | Abate Method:          | No Action Taken - no action has as yet been taken at the site |                |               |
|                                                                          |           |          |                |           | Review Date:           | Not reported                                                  | Confirm Leak:  | Not reported  |
|                                                                          |           |          |                |           | Workplan:              | Not reported                                                  | Prelim Assess: | Not reported  |
|                                                                          |           |          |                |           | Pollution Char:        | Not reported                                                  | Remed Plan:    | Not reported  |
|                                                                          |           |          |                |           | Remed Action:          | Not reported                                                  |                |               |
|                                                                          |           |          |                |           | Monitoring:            | Not reported                                                  |                |               |
|                                                                          |           |          |                |           | Close Date:            | 08/08/1996                                                    |                |               |
|                                                                          |           |          |                |           | Release Date:          | 09/04/1986                                                    |                |               |
|                                                                          |           |          |                |           | Cleanup Fund Id :      | Not reported                                                  |                |               |
|                                                                          |           |          |                |           | Discover Date :        | 09/04/1986                                                    |                |               |
|                                                                          |           |          |                |           | Enforcement Dt :       | Not reported                                                  |                |               |
|                                                                          |           |          |                |           | Enf Type:              | Not reported                                                  |                |               |
|                                                                          |           |          |                |           | Enter Date :           | 09/04/1986                                                    |                |               |
|                                                                          |           |          |                |           | Funding:               | Federal Funds                                                 |                |               |
|                                                                          |           |          |                |           | Staff Initials:        | ZZZ                                                           |                |               |
|                                                                          |           |          |                |           | How Discovered:        | Tank Closure                                                  |                |               |
|                                                                          |           |          |                |           | How Stopped:           | Not reported                                                  |                |               |
|                                                                          |           |          |                |           | Interim :              | No                                                            |                |               |
|                                                                          |           |          |                |           | Leak Cause:            | Structure Failure                                             |                |               |
|                                                                          |           |          |                |           | Leak Source:           | Tank                                                          |                |               |
|                                                                          |           |          |                |           | MTBE Date :            | / /                                                           |                |               |
|                                                                          |           |          |                |           | Max MTBE GW :          | 0 Parts per Billion                                           |                |               |
|                                                                          |           |          |                |           | MTBE Tested:           | Not Required to be Tested.                                    |                |               |
|                                                                          |           |          |                |           | Priority:              | Not reported                                                  |                |               |



Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

Site

MAP FINDINGS

Database(s)

EDR ID Number  
EPA ID Number

PACIFIC BELL (Continued)

1000251880

Local Case # : 54  
Beneficial: Not reported  
Staff : MRC  
GW Qualifier : Not reported  
Max MTBE Soil : Not reported  
Soil Qualifier : Not reported  
Hydr Basin # : Not reported  
Operator : Not reported  
Oversight Prgm: RB Lead Underground Storage Tank  
Oversight Prgm : UST  
Review Date : 10/29/1999  
Stop Date : 09/04/1986  
Work Suspended : No  
Responsible Party: BLANK RP  
RP Address: Not reported  
Global Id: T0605500117  
Org Name: Not reported  
Contact Person: Not reported  
MTBE Conc: 0  
Mtbe Fuel: 0  
Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported

LUST Region 2:

Region: 2  
Case Number: T0605500117  
Facility Id: 28-0128  
Entered Date: 09/04/1986  
Facility Status: Case Closed  
Maximum Soil Concentration: 0  
Maximum Groundwater Impact: 170  
County : Napa  
Current Benzene: Not reported  
MTBE Detected in GW: Not reported  
MTBE Detected in Soil: Not reported  
MTBE: 0  
MTBE Qualify: Not reported

LUST NAPA County:

Facility ID: NAPA0054  
Region: NAPA  
Date Closed: 07/23/1996

HAZNET:

Gepaid: CAT080029341  
TSD EPA ID: CAD043260702  
Gen County: Napa  
Tsd County: San Mateo  
Tons: .0000  
Waste Category:  
Disposal Method: Recycler  
Contact: PACIFIC BELL  
Telephone: (925) 823-6161  
Mailing Address: RM 3E000  
SAN RAMON, CA 94583 - 0995  
County Napa

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

PACIFIC BELL (Continued)

EDR ID Number  
EPA ID Number

1000251880

Gepaid: CAT080029341  
TSD EPA ID: CAD043260702  
Gen County: Napa  
Tsd County: San Mateo  
Tons: 20.0160  
Waste Category: Tank bottom waste  
Disposal Method: Not reported  
Contact: PACIFIC BELL  
Telephone: (925) 823-6161  
Mailing Address: RM 3E000  
SAN RAMON, CA 94583 - 0995  
County Napa  
Gepaid: CAT080029341  
TSD EPA ID: CAD083166728  
Gen County: Napa  
Tsd County: Stanislaus  
Tons: .3127  
Waste Category: Unspecified oil-containing waste  
Disposal Method: Recycler  
Contact: PACIFIC BELL  
Telephone: (925) 823-6161  
Mailing Address: RM 3E000  
SAN RAMON, CA 94583 - 0995  
County Napa  
Gepaid: CAT080029341  
TSD EPA ID: CAD981388952  
Gen County: Napa  
Tsd County: Shasta  
Tons: .0000  
Waste Category: Asbestos-containing waste  
Disposal Method: Disposal, Land Fill  
Contact: PACIFIC BELL  
Telephone: (925) 823-6161  
Mailing Address: RM 3E000  
SAN RAMON, CA 94583 - 0995  
County Napa  
Gepaid: CAT080029341  
TSD EPA ID: CAD083166728  
Gen County: Napa  
Tsd County: Stanislaus  
Tons: .6087  
Waste Category: Unspecified oil-containing waste  
Disposal Method: Recycler  
Contact: PACIFIC BELL  
Telephone: (925) 823-6161  
Mailing Address: RM 3E000  
SAN RAMON, CA 94583 - 0995  
County Napa

The CA HAZNET database contains 2 additional records for this site.  
Please click here or contact your EDR Account Executive for more information.

CORTESE:  
Region: CORTESE  
Fac Address 2: 1240 OAK ST

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

## MAP FINDINGS

Database(s)  
EDR ID Number  
EPA ID Number

## PACIFIC BELL \ (Continued\)

1000251880

31  
SSE  
1/2-1  
4330 ft.

BP  
1108 MAIN ST  
ST HELENA, CA 94574

LUST  
Cortese  
S104025332  
N/A

Relative:  
Lower

Actual:  
231 ft.

## State LUST:

Cross Street: Pope Street  
Qty Leaked: Not reported  
Case Number: 28-0186  
Reg Board: 2  
Chemical: Gasoline  
Lead Agency: Local Agency  
Local Agency: 0  
Case Type: Other ground water affected  
Status: Remedial action \ (cleanup\ ) Underway  
Abate Method: No Action Taken - no action has as yet been taken at the site  
Review Date: Not reported  
Workplan: Not reported  
Pollution Char: 4/26/02  
Remed Action: 9/11/02  
Monitoring: Not reported  
Close Date: Not reported  
Release Date: 12/17/1990  
Cleanup Fund Id : Not reported  
Discover Date : 12/17/1990  
Enforcement Dt : 11/13/92  
Enf Type: EF  
Enter Date : 03/11/1991  
Funding: Federal Funds  
Staff Initials: JMB  
How Discovered: Tank Closure  
How Stopped: Not reported  
Interim : No  
Leak Cause: Structure Failure  
Leak Source: Tank  
MTBE Date : 06/28/2002  
Max MTBE GW : 2700 Parts per Billion  
MTBE Tested: MTBE Detected. Site tested for MTBE & MTBE detected  
Priority: Not reported  
Local Case # : 243  
Beneficial: AGR, GWR, MUN, WILD  
Staff : MRC  
GW Qualifier : =  
Max MTBE Soil : Not reported  
Soil Qualifier : Not reported  
Hydr Basin #: Not reported  
Operator : Not reported  
Oversight Prgm: Local Oversight Program UST  
Oversight Prgm : LOP  
Review Date : 06/01/1999  
Stop Date : 12/17/1990  
Work Suspended No  
Responsible Party: BLANK RP  
RP Address: Not reported  
Global Id: T0605500168  
Org Name: Not reported  
Contact Person: Not reported  
MTBE Conc: 7

Confirm Leak: Not reported  
Prelim Assess: Not reported  
Remed Plan: 4/26/02

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

## MAP FINDINGS

## BP (Continued)

S104025332

Mtbe Fuel: 1  
Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported

## LUST Region 2:

Region: 2  
Case Number: T0605500168  
Facility Id: 28-0186  
Entered Date: 03/11/1991  
Facility Status: Remedial action (cleanup) Underway  
Maximum Soil Concentration: 190  
Maximum Groundwater Impact: 9999999  
County: Napa  
Current Benzene: 190  
MTBE Detected in GW: 2800  
MTBE Detected in Soil: Not reported  
MTBE: 110  
MTBE Qualify: =

## CORTESE:

Region: CORTESE  
Fac Address 2: 1108 MAIN ST

E32 ST HELENA PETROLEUM INC  
SSE 929 MAIN ST  
> 1 ST HELENA, CA  
5283 ft.

LUST S104025337  
Cortese N/A

## Site 1 of 2 in cluster E

Relative:  
Lower

## State LUST:

Cross Street: Not reported  
Qty Leaked: Not reported  
Case Number: 28-0201  
Reg Board: 2  
Chemical: Gasoline  
Lead Agency: Local Agency  
Local Agency: 0  
Case Type: Other ground water affected  
Status: Case Closed  
Abate Method: No Action Taken - no action has as yet been taken at the site  
Review Date: 08/05/1992  
Workplan: Not reported  
Pollution Char: Not reported  
Remed Action: Not reported  
Monitoring: Not reported  
Close Date: 05/29/1997  
Release Date: 08/05/1992  
Cleanup Fund Id: Not reported  
Discover Date: 04/09/1992  
Enforcement Dt: Not reported  
Enf Type: Not reported  
Enter Date: 09/23/1992  
Funding: Federal Funds  
Staff Initials: ZZZ  
How Discovered: Tank Closure  
How Stopped: Not reported  
Interim: No

Confirm Leak: 08/05/1992  
Prelim Assess: Not reported  
Remed Plan: Not reported

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

ST HELENA PETROLEUM INC \ (Continued)

S104025337

Leak Cause: Structure Failure  
Leak Source: Tank  
MTBE Date: / /  
Max MTBE GW: 0 Parts per Billion  
MTBE Tested: Site NOT Tested for MTBE. Includes Unknown and Not Analyzed.  
Priority: Not reported  
Local Case #: 144  
Beneficial: Not reported  
Staff: MRC  
GW Qualifier: Not reported  
Max MTBE Soil: Not reported  
Soil Qualifier: Not reported  
Hydr Basin #: Not reported  
Operator: Not reported  
Oversight Prgm: Local Oversight Program UST  
Oversight Prgm: LOP  
Review Date: 10/29/1999  
Stop Date: 04/09/1992  
Work Suspended: No  
Responsible Party: BLANK RP  
RP Address: Not reported  
Global Id: T0605500182  
Org Name: Not reported  
Contact Person: Not reported  
MTBE Conc: 0  
Mtb Fuel: 1  
Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported

LUST Region 2:

Region: 2  
Case Number: T0605500182  
Facility Id: 28-0201  
Entered Date: 09/23/1992  
Facility Status: Case Closed  
Maximum Soil Concentration: 230  
Maximum Groundwater Impact: 6400  
County: Napa  
Current Benzene: 15  
MTBE Detected in GW: Not reported  
MTBE Detected in Soil: Not reported  
MTBE: 0  
MTBE Qualify: Not reported

CORTESE:

Region: CORTESE  
Fac Address 2: 929 MAIN ST

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

Site

MAP FINDINGS

Database(s)

EDR ID Number  
EPA ID Number

E33 ST HELENA PETROLEUM  
SE 905 MAIN ST  
> 1 ST HELENA, CA 94574  
5314 ft.

LUST S104025320  
Cortese N/A

Site 2 of 2 in cluster E

Relative:  
Lower

State LUST:

Actual:  
229 ft.

Cross Street: Not reported  
Qty Leaked: Not reported  
Case Number 28-0117  
Reg Board: 2  
Chemical: Misc. Motor Vehicle Fuels  
Lead Agency: Local Agency  
Local Agency : 0  
Case Type: Soil only  
Status: Case Closed  
Abate Method: Excavate and Treat - remove contaminated soil and treat \ (includes spreading or land farming)  
Review Date: 03/04/1987  
Workplan: Not reported  
Pollution Char: Not reported  
Remed Action: Not reported  
Monitoring: Not reported  
Close Date: 05/29/1997  
Release Date: 02/23/1990  
Cleanup Fund Id : Not reported  
Discover Date : 02/27/1990  
Enforcement Dt : 4/4/90  
Enf Type: EF  
Enter Date : 03/26/1990  
Funding: Federal Funds  
Staff Initials: ZZZ  
How Discovered: Tank Closure  
How Stopped: Not reported  
Interim : Yes  
Leak Cause: Structure Failure  
Leak Source: Tank  
MTBE Date : / /  
Max MTBE GW : 0 Parts per Billion  
MTBE Tested: Not Required to be Tested.  
Priority: Not reported  
Local Case # : 145  
Beneficial: Not reported  
Staff : MRC  
GW Qualifier : Not reported  
Max MTBE Soil : Not reported  
Soil Qualifier : Not reported  
Hydr Basin #: Not reported  
Operator : Not reported  
Oversight Prgm: Local Oversight Program UST  
Oversight Prgm : LOP  
Review Date : 10/29/1999  
Stop Date : 02/27/1990  
Work Suspended :No  
Responsible Party:BLANK RP  
RP Address: Not reported  
Global Id: T0805500109  
Org Name: Not reported  
Contact Person: Not reported

Confirm Leak: 03/04/1987  
Prelim Assess: Not reported  
Remed Plan: Not reported

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s)

EDR ID Number  
EPA ID Number

ST HELENA PETROLEUM (Continued)

S104025320

MTBE Conc: 0  
Mtb Fuel: 0  
Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported

LUST Region 2:

Region: 2  
Case Number: T0605500109  
Facility Id: 28-0117  
Entered Date: 03/26/1990  
Facility Status: Case Closed  
Maximum Soil Concentration: 1700  
Maximum Groundwater Impact: 0  
County: Napa  
Current Benzene: Not reported  
MTBE Detected in GW: Not reported  
MTBE Detected in Soil: Not reported  
MTBE: 0  
MTBE Qualify: Not reported

CORTESE:

Region: CORTESE  
Fac Address 2: 905 MAIN ST

34  
SSE  
> 1  
5467 ft.

ST HELENA CITY CORPORATION YARD  
1405 CHARTER OAK  
ST HELENA, CA 94574

LUST S104025338  
Cortese N/A

Relative:  
Lower

Actual:  
235 ft.

State LUST:

Cross Street: Not reported  
Qty Leaked: Not reported  
Case Number: 28-0205  
Reg Board: 2  
Chemical: Diesel  
Lead Agency: Local Agency  
Local Agency: 0  
Case Type: Undefined  
Status: Leak being confirmed  
Abate Method: No Action Taken - no action has as yet been taken at the site  
Review Date: 08/20/1996  
Workplan: Not reported  
Pollution Char: Not reported  
Remed Action: Not reported  
Monitoring: Not reported  
Close Date: Not reported  
Release Date: 06/03/1991  
Cleanup Fund Id: Not reported  
Discover Date: 06/07/1991  
Enforcement Dt: Not reported  
Enf Type: Not reported  
Enter Date: 12/29/1992  
Funding: Federal Funds  
Staff Initials: JMC  
How Discovered: Tank Closure  
How Stopped: Not reported  
Interim: No

Confirm Leak: 08/20/1996  
Prelim Assess: Not reported  
Remed Plan: Not reported

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

ST HELENA CITY CORPORATION YARD (Continued)

S104025338

Leak Cause: Structure Failure  
Leak Source: Tank  
MTBE Date: / /  
Max MTBE GW: 0 Parts per Billion  
MTBE Tested: Not Required to be Tested.  
Priority: Not reported  
Local Case #: 608  
Beneficial: Not reported  
Staff: MRC  
GW Qualifier: Not reported  
Max MTBE Soil: Not reported  
Soil Qualifier: Not reported  
Hydr Basin #: Not reported  
Operator: Not reported  
Oversight Prgm: Local Oversight Program UST  
Oversight Prgm: LOP  
Review Date: 07/27/2000  
Stop Date: 06/07/1991  
Work Suspended: No  
Responsible Party: BLANK RP  
RP Address: Not reported  
Global Id: T0605500185  
Org Name: Not reported  
Contact Person: Not reported  
MTBE Conc: 0  
Mtbe Fuel: 0  
Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported

LUST Region 2:

Region: 2  
Case Number: T0605500185  
Facility Id: 28-0205  
Entered Date: 12/29/1992  
Facility Status: Leak being confirmed  
Maximum Soil Concentration: 0  
Maximum Groundwater Impact: 0  
County: Napa  
Current Benzene: Not reported  
MTBE Detected in GW: Not reported  
MTBE Detected in Soil: Not reported  
MTBE: 0  
MTBE Qualify: Not reported

CORTESE:

Region: CORTESE  
Fac Address 2: Not reported



| Map ID         | MAP FINDINGS        |                                                               |                | EDR ID Number |
|----------------|---------------------|---------------------------------------------------------------|----------------|---------------|
| Direction      |                     |                                                               |                |               |
| Distance       |                     |                                                               |                |               |
| Distance (ft.) |                     |                                                               |                |               |
| Elevation      | Site                |                                                               | Database(s)    | EPA ID Number |
| 35             | BELLANI RESIDENCE   |                                                               | UST            | U003114816    |
| SE             | 738 MAIN ST         |                                                               | LUST           | N/A           |
| > 1            | ST HELENA, CA 94574 |                                                               | Cortese        |               |
| 5923 ft.       |                     |                                                               |                |               |
| Relative:      | State LUST:         |                                                               |                |               |
| Lower          | Cross Street:       | Not reported                                                  |                |               |
|                | Qty Leaked:         | Not reported                                                  |                |               |
| Actual:        | Case Number         | 28-0017                                                       |                |               |
| 234 ft.        | Reg Board:          | 2                                                             |                |               |
|                | Chemical:           | Gasoline                                                      |                |               |
|                | Lead Agency:        | Local Agency                                                  |                |               |
|                | Local Agency :      | 0                                                             |                |               |
|                | Case Type:          | Soil only                                                     |                |               |
|                | Status:             | Case Closed                                                   |                |               |
|                | Abate Method:       | No Action Taken - no action has as yet been taken at the site |                |               |
|                | Review Date:        | 07/06/1989                                                    | Confirm Leak:  | 07/06/1989    |
|                | Workplan:           | Not reported                                                  | Prelim Assess: | Not reported  |
|                | Pollution Char:     | Not reported                                                  | Remed Plan:    | Not reported  |
|                | Remed Action:       | Not reported                                                  |                |               |
|                | Monitoring:         | Not reported                                                  |                |               |
|                | Close Date:         | 06/24/1997                                                    |                |               |
|                | Release Date:       | 04/05/1990                                                    |                |               |
|                | Cleanup Fund Id :   | Not reported                                                  |                |               |
|                | Discover Date :     | 04/09/1990                                                    |                |               |
|                | Enforcement Dt :    | 12/24/91                                                      |                |               |
|                | Enf Type:           | EF                                                            |                |               |
|                | Enter Date :        | 04/23/1990                                                    |                |               |
|                | Funding:            | Federal Funds                                                 |                |               |
|                | Staff Initials:     | ZZZ                                                           |                |               |
|                | How Discovered:     | Tank Closure                                                  |                |               |
|                | How Stopped:        | Not reported                                                  |                |               |
|                | Interim :           | No                                                            |                |               |
|                | Leak Cause:         | Structure Failure                                             |                |               |
|                | Leak Source:        | Tank                                                          |                |               |
|                | MTBE Date :         | / /                                                           |                |               |
|                | Max MTBE GW :       | 0 Parts per Billion                                           |                |               |
|                | MTBE Tested:        | Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.   |                |               |
|                | Priority:           | Not reported                                                  |                |               |
|                | Local Case # :      | 283                                                           |                |               |
|                | Beneficial:         | Not reported                                                  |                |               |
|                | Staff :             | MRC                                                           |                |               |
|                | GW Qualifier :      | Not reported                                                  |                |               |
|                | Max MTBE Soil :     | Not reported                                                  |                |               |
|                | Soil Qualifier :    | Not reported                                                  |                |               |
|                | Hydr Basin #:       | Not reported                                                  |                |               |
|                | Operator :          | Not reported                                                  |                |               |
|                | Oversight Prgm:     | Local Oversight Program UST                                   |                |               |
|                | Oversight Prgm :    | LOP                                                           |                |               |
|                | Review Date :       | 11/21/1996                                                    |                |               |
|                | Stop Date :         | 04/09/1990                                                    |                |               |
|                | Work Suspended :    | No                                                            |                |               |
|                | Responsible Party:  | BLANK RP                                                      |                |               |
|                | RP Address:         | Not reported                                                  |                |               |
|                | Global Id:          | T0605500016                                                   |                |               |
|                | Org Name:           | Not reported                                                  |                |               |
|                | Contact Person:     | Not reported                                                  |                |               |
|                | MTBE Conc:          | 0                                                             |                |               |
|                | Mtbe Fuel:          | 1                                                             |                |               |

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

**BELLANI RESIDENCE (Continued)**

U003114816

Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported

**LUST Region 2:**

Region: 2  
Case Number: T0605500016  
Facility Id: 28-0017  
Entered Date: 04/23/1990  
Facility Status: Case Closed  
Maximum Soil Concentration: 4800  
Maximum Groundwater Impact: 0  
County: Napa  
Current Benzene: Not reported  
MTBE Detected in GW: Not reported  
MTBE Detected in Soil: Not reported  
MTBE: 0  
MTBE Qualify: Not reported

**LUST NAPA County:**

Facility ID: NAPA0283  
Region: NAPA  
Date Closed: 06/24/1997

**CORTESE:**

Region: CORTESE  
Fac Address 2: 738 MAIN ST

**UST Napa County:**

Facility ID: NAPA0283  
Region: NAPA

Num of Tanks: 0

36  
South  
> 1  
6336 ft.

**ST HELENA CEMETERY ASSOC**  
**2461 2 SPRING ST**  
**ST HELENA, CA 94574**

**LUST S104156903**  
**Cortese N/A**

**Relative:**  
**Higher**

**LUST Region 2:**

Region: 2  
Case Number: T0605500143  
Facility Id: 28-0159  
Entered Date: 01/06/1992  
Facility Status: Pollution Characterization  
Maximum Soil Concentration: 2000  
Maximum Groundwater Impact: 45000  
County: Napa  
Current Benzene: 65  
MTBE Detected in GW: 930  
MTBE Detected in Soil: .11  
MTBE: 1  
MTBE Qualify: =

**Actual:**  
**267 ft.**

**CORTESE:**

Region: CORTESE  
Fac Address 2: 2461 2 SPRING ST

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s)  
EDR ID Number  
EPA ID Number

ST HELENA CEMETERY ASSOC \ (Continued\)

S104156903

37  
SE  
> 1  
6506 ft.

EPPS CHEVROLET  
555 MAIN ST  
ST HELENA, CA 94574

LUST  
Cortese  
HAZNET  
S104165817  
N/A

Relative:  
Lower

Actual:  
234 ft.

State LUST:

Cross Street: Not reported  
Qty Leaked: Not reported  
Case Number: 28-0267  
Reg Board: 2  
Chemical: Waste Oil  
Lead Agency: Local Agency  
Local Agency: 0  
Case Type: Soil only  
Status: Case Closed  
Review Date: 02/05/1996  
Workplan: Not reported  
Pollution Char: Not reported  
Remed Action: Not reported  
Monitoring: Not reported  
Close Date: 10/13/2000  
Release Date: 05/04/1995  
Cleanup Fund Id: Not reported  
Discover Date: 02/14/1995  
Enforcement Dt: Not reported  
Enf Type: Not reported  
Enter Date: 06/20/1995  
Funding: Not reported  
Staff Initials: ZZZ  
How Discovered: Tank Closure  
How Stopped: Not reported  
Interim: Not reported  
Leak Cause: Corrosion  
Leak Source: Tank  
MTBE Date: 01/02/1965  
Max MTBE GW: 0 Parts per Billion  
MTBE Tested: MTBE Detected. Site tested for MTBE & MTBE detected  
Priority: Not reported  
Local Case #: 639  
Beneficial: Not reported  
Staff: MRC  
GW Qualifier: Not reported  
Max MTBE Soil: Not reported  
Soil Qualifier: Not reported  
Hydr Basin #: Not reported  
Operator: Not reported  
Oversight Prgm: Local Oversight Program UST  
Oversight Prgm: LOP  
Review Date: 03/06/2001  
Stop Date: 02/14/1995  
Work Suspended: No  
Responsible Party: BLANK RP  
RP Address: Not reported  
Global Id: T0605500229  
Org Name: Not reported  
Contact Person: Not reported  
MTBE Conc: 1  
Mtb Fuel: 0

Confirm Leak: 02/05/1996  
Prelim Assess: Not reported  
Remed Plan: Not reported

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

**EPPS CHEVROLET (Continued)**

**S104165817**

Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported

**LUST Region 2:**

Region: 2  
Case Number: T0605500229  
Facility Id: 28-0267  
Entered Date: 06/20/1995  
Facility Status: Case Closed  
Maximum Soil Concentration: 0  
Maximum Groundwater Impact: 0  
County: Napa  
Current Benzene: Not reported  
MTBE Detected in GW: No  
MTBE Detected in Soil: Not reported  
MTBE: 0  
MTBE Qualify: ND

**HAZNET:**

Gepaid: CAC000726816  
TSD EPA ID: CAD009466392  
Gen County: Napa  
Tsd County: 7  
Tons: .2500  
Waste Category: Other empty containers 30 gallons or more  
Disposal Method: Recycler  
Contact: JEFFREY EPPS  
Telephone: (707) 963-3681  
Mailing Address: 555 MAIN STREET  
SAINT HELENA, CA 94574  
County: Napa

**CORTESE:**

Region: CORTESE  
Fac Address 2: 555 MAIN ST

MAP FINDINGS - EDR PROPRIETARY HISTORICAL DATABASES

| YEAR                                                                                                                                                                                           | NAME                                                                                                                                                                                                                                                   | ADDRESS                   | CITY       | ST | DIR. | DIST. | ELV.  | TYPE        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|------------|----|------|-------|-------|-------------|
| N/A                                                                                                                                                                                            | ST. HELENA GAS CO.<br>Description: St. Helena Gas Works is south of Main Street and east of the dead end of Oak Str Sulphur Spring Creek. 1929, site called Napa Valley Elecc Co. By 1944, site and Electric St. Helena Sub Station, gas holders gone. | SOUTH OF 1061 MAIN STREET | ST. HELENA | CA | SSE  | 1/2-1 | Higer | NAPA COUNTY |
| ©Copyright 1993 Real Property Scan, Inc.                                                                                                                                                       |                                                                                                                                                                                                                                                        |                           |            |    |      |       |       |             |
| EDR Historical Gas Station & Dry Cleaner Search: No mapped sites were found in EDR's search of the EDR Historical Gas Station & Dry Cleaner Database within 0.250 mile of the Target Property. |                                                                                                                                                                                                                                                        |                           |            |    |      |       |       |             |

ORPHAN SUMMARY

| City         | EDR ID     | Site Name                              | Site Address              | Zip   | Database(s)   |
|--------------|------------|----------------------------------------|---------------------------|-------|---------------|
| HELENA       | S103666643 | FLORA SPRINGS WINE CO                  | 607 SOUTH HELENA SAINT    | 94574 | HAZNET        |
| NAPA         | S105086055 | CALTRANS DIST 4                        | RT 128 P.M. 18.2          | 94574 | HAZNET        |
| RUTHERFORD   | U001598311 | JEAN CLAUDE BOISSET LION IMPOR         | 8440 ST. HELENA HWY       | 94574 | HIST UST      |
| SAINT HELENA | S103967578 | HENDRICK SMEDING                       | 1371 / 1375 MAIN ST       | 94574 | HAZNET        |
| SAINT HELENA | S104575107 | NAPA COUNTY UPPER VALLEY WASTE MGMT AG | 1673 HWY 29               | 94574 | HAZNET        |
| SAINT HELENA | S105084657 | CALTRANS                               | ROUTE 29 IN SULPHUR CREEK | 94574 | HAZNET        |
| ST HELENA    | U003114713 | KUHN PROPERTY                          | 0 HWY 128                 | 94574 | UST           |
| ST HELENA    | S105026749 | TRIPOLI MARKET                         | 607 HWY 29                | 94574 | LUST, Cortese |
| ST HELENA    | S105722400 | C MONDAVI & SONS                       | 2800 ST HELENA HIGHWAY    | 94574 | HAZNET        |
| ST HELENA    | U003114989 | PAT GOLDEN                             | 3291 ST. HELENA HWY       | 94574 | UST           |
| ST HELENA    | 1003876942 | PG&E GAS PLANT ST HELENA               | MAIN ST BR BRIDGE         | 94574 | CERC-NFRAP    |
| ST HELENA    | S106027709 | ST HELENA CEMETERY ASSOC               | SPRING ST                 | 94574 | LUST          |
| ST. HELENA   | U001598332 | RICHARD A. KUHN                        | HWY 128                   | 94574 | HIST UST      |
| ST. HELENA   | U001598273 | BERINGER VINEYARDS                     | 2000 MAIN STREET          | 94574 | HIST UST      |
| ST. HELENA   | U001598278 | COLLINS VINEYARD                       | 3486 N. ST. HELENA HWY    | 94574 | HIST UST      |

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## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

**Elapsed ASTM days:** Provides confirmation that this EDR report meets or exceeds the 90-day updating requirement of the ASTM standard.

### FEDERAL ASTM STANDARD RECORDS

#### **NPL: National Priority List**

Source: EPA

Telephone: N/A

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 07/22/03

Date Made Active at EDR: 08/26/03

Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 08/04/03

Elapsed ASTM days: 22

Date of Last EDR Contact: 11/03/03

#### **NPL Site Boundaries**

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)

Telephone: 202-564-7333

EPA Region 1

Telephone 617-918-1143

EPA Region 3

Telephone 215-814-5418

EPA Region 4

Telephone 404-562-8033

EPA Region 6

Telephone: 214-655-6659

EPA Region 8

Telephone: 303-312-6774

#### **Proposed NPL: Proposed National Priority List Sites**

Source: EPA

Telephone: N/A

Date of Government Version: 06/10/03

Date Made Active at EDR: 08/26/03

Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 08/04/03

Elapsed ASTM days: 22

Date of Last EDR Contact: 11/03/03

#### **CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System**

Source: EPA

Telephone: 703-413-0223

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 09/11/03

Date Made Active at EDR: 10/29/03

Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 09/24/03

Elapsed ASTM days: 35

Date of Last EDR Contact: 09/24/03

#### **CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned**

Source: EPA

Telephone: 703-413-0223

As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration. EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 09/11/03  
 Date Made Active at EDR: 10/29/03  
 Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 09/24/03  
 Elapsed ASTM days: 35  
 Date of Last EDR Contact: 09/24/03

### **CORRACTS:** Corrective Action Report

Source: EPA  
 Telephone: 800-424-9346

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 09/17/03  
 Date Made Active at EDR: 11/11/03  
 Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 10/01/03  
 Elapsed ASTM days: 41  
 Date of Last EDR Contact: 09/08/03

### **RCRIS:** Resource Conservation and Recovery Information System

Source: EPA  
 Telephone: 800-424-9346

Resource Conservation and Recovery Information System. RCRIS includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs): generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs): generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs): generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 09/10/03  
 Date Made Active at EDR: 10/01/03  
 Database Release Frequency: Varies

Date of Data Arrival at EDR: 09/11/03  
 Elapsed ASTM days: 20  
 Date of Last EDR Contact: 11/18/03

### **ERNS:** Emergency Response Notification System

Source: National Response Center, United States Coast Guard  
 Telephone: 202-260-2342

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/02  
 Date Made Active at EDR: 02/03/03  
 Database Release Frequency: Annually

Date of Data Arrival at EDR: 01/27/03  
 Elapsed ASTM days: 7  
 Date of Last EDR Contact: 10/27/03

### **FEDERAL ASTM SUPPLEMENTAL RECORDS**

#### **BRS:** Biennial Reporting System

Source: EPA/NTIS  
 Telephone: 800-424-9346

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/01/01  
 Database Release Frequency: Biennially

Date of Last EDR Contact: 10/01/03  
 Date of Next Scheduled EDR Contact: 12/15/03

#### **CONSENT:** Superfund (CERCLA) Consent Decrees

Source: EPA Regional Offices  
 Telephone: Varies

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: N/A  
 Database Release Frequency: Varies

Date of Last EDR Contact: N/A  
 Date of Next Scheduled EDR Contact: N/A



## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

**ROD: Records Of Decision**

Source: EPA

Telephone: 703-416-0223

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 07/09/03

Database Release Frequency: Annually

Date of Last EDR Contact: 10/08/03

Date of Next Scheduled EDR Contact: 01/05/04

**DELISTED NPL: National Priority List Deletions**

Source: EPA

Telephone: N/A

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 07/22/03

Database Release Frequency: Quarterly

Date of Last EDR Contact: 11/03/03

Date of Next Scheduled EDR Contact: 02/02/04

**FINDS: Facility Index System/Facility Identification Initiative Program Summary Report**

Source: EPA

Telephone: N/A

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 07/25/03

Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/07/03

Date of Next Scheduled EDR Contact: 01/05/04

**HMIRS: Hazardous Materials Information Reporting System**

Source: U.S. Department of Transportation

Telephone: 202-366-4555

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 03/31/03

Database Release Frequency: Annually

Date of Last EDR Contact: 10/23/03

Date of Next Scheduled EDR Contact: 01/19/04

**MLTS: Material Licensing Tracking System**

Source: Nuclear Regulatory Commission

Telephone: 301-415-7169

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/16/03

Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/07/03

Date of Next Scheduled EDR Contact: 01/05/04

**MINES: Mines Master Index File**

Source: Department of Labor, Mine Safety and Health Administration

Telephone: 303-231-5959

Date of Government Version: 08/27/03

Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 10/01/03

Date of Next Scheduled EDR Contact: 12/29/03

**NPL LIENS: Federal Superfund Liens**

Source: EPA

Telephone: 202-564-4267

Federal Superfund Liens. Under the authority granted the USEPA by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner receives notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/15/91  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 08/25/03  
Date of Next Scheduled EDR Contact: 11/24/03

**PADS: PCB Activity Database System**

Source: EPA

Telephone: 202-564-3887

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 06/30/03  
Database Release Frequency: Annually

Date of Last EDR Contact: 11/12/03  
Date of Next Scheduled EDR Contact: 02/09/04

**DOD: Department of Defense Sites**

Source: USGS

Telephone: 703-648-5920

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 04/01/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 11/12/03  
Date of Next Scheduled EDR Contact: 02/09/04

**STORMWATER: Storm Water General Permits**

Source: Environmental Protection Agency

Telephone: 202 564-0746

A listing of all facilities with Storm Water General Permits.

Date of Government Version: N/A  
Database Release Frequency: Quarterly

Date of Last EDR Contact: N/A  
Date of Next Scheduled EDR Contact: N/A

**US BROWNFIELDS: A Listing of Brownfields Sites**

Source: Environmental Protection Agency

Telephone: 202-566-2777

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become BCRLF cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 07/15/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 09/15/03  
Date of Next Scheduled EDR Contact: 12/15/03

**RMP: Risk Management Plans**

Source: Environmental Protection Agency

Telephone: 202-564-8600

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: N/A  
Database Release Frequency: N/A

Date of Last EDR Contact: N/A  
Date of Next Scheduled EDR Contact: N/A

**RAATS: RCRA Administrative Action Tracking System**

Source: EPA  
Telephone: 202-564-4104

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/95  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 09/08/03  
Date of Next Scheduled EDR Contact: 12/08/03

**TRIS: Toxic Chemical Release Inventory System**

Source: EPA  
Telephone: 202-260-1531

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/01  
Database Release Frequency: Annually

Date of Last EDR Contact: 09/23/03  
Date of Next Scheduled EDR Contact: 12/22/03

**TSCA: Toxic Substances Control Act**

Source: EPA  
Telephone: 202-260-5521

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/98  
Database Release Frequency: Every 4 Years

Date of Last EDR Contact: 09/02/03  
Date of Next Scheduled EDR Contact: 12/08/03

**FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)**

Source: EPA  
Telephone: 202-564-2501

Date of Government Version: 10/16/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/23/03  
Date of Next Scheduled EDR Contact: 12/22/03

**SSTS: Section 7 Tracking Systems**

Source: EPA  
Telephone: 202-564-5008

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/01  
Database Release Frequency: Annually

Date of Last EDR Contact: 10/20/03  
Date of Next Scheduled EDR Contact: 01/19/04

**FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)**

Source: EPA/Office of Prevention, Pesticides and Toxic Substances  
Telephone: 202-564-2501

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/16/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/23/03  
Date of Next Scheduled EDR Contact: 12/22/03

### STATE OF CALIFORNIA ASTM STANDARD RECORDS

#### **AWP: Annual Workplan Sites**

Source: California Environmental Protection Agency  
Telephone: 916-323-3400

Known Hazardous Waste Sites. California DTSC's Annual Workplan (AWP), formerly BEP, identifies known hazardous substance sites targeted for cleanup.

Date of Government Version: 08/31/03  
Date Made Active at EDR: 09/17/03  
Database Release Frequency: Annually

Date of Data Arrival at EDR: 09/02/03  
Elapsed ASTM days: 15  
Date of Last EDR Contact: 09/02/03

#### **CAL-SITES: Calsites Database**

Source: Department of Toxic Substance Control  
Telephone: 916-323-3400

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database.

Date of Government Version: 08/31/03  
Date Made Active at EDR: 09/17/03  
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 09/02/03  
Elapsed ASTM days: 15  
Date of Last EDR Contact: 09/02/03

#### **CHMIRS: California Hazardous Material Incident Report System**

Source: Office of Emergency Services  
Telephone: 916-845-8400

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/31/02  
Date Made Active at EDR: 08/07/03  
Database Release Frequency: Varies

Date of Data Arrival at EDR: 07/11/03  
Elapsed ASTM days: 27  
Date of Last EDR Contact: 08/25/03

#### **CORTESE: "Cortese" Hazardous Waste & Substances Sites List**

Source: CAL EPA/Office of Emergency Information  
Telephone: 916-323-9100

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 04/01/01  
Date Made Active at EDR: 07/26/01  
Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 05/29/01  
Elapsed ASTM days: 58  
Date of Last EDR Contact: 10/27/03

#### **NOTIFY 65: Proposition 65 Records**

Source: State Water Resources Control Board  
Telephone: 916-445-3846

Proposition 65 Notification Records. NOTIFY 65 contains facility notifications about any release which could impact drinking water and thereby expose the public to a potential health risk.

Date of Government Version: 10/21/93  
Date Made Active at EDR: 11/19/93  
Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 11/01/93  
Elapsed ASTM days: 18  
Date of Last EDR Contact: 10/20/03

#### **TOXIC PITS: Toxic Pits Cleanup Act Sites**

Source: State Water Resources Control Board  
Telephone: 916-227-4364

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 07/01/95  
 Date Made Active at EDR: 09/26/95  
 Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 08/30/95  
 Elapsed ASTM days: 27  
 Date of Last EDR Contact: 11/03/03

**SWF/LF (SWIS): Solid Waste Information System**

Source: Integrated Waste Management Board  
 Telephone: 916-341-6320

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inventory of solid waste disposal facilities or landfills. These may be active or inactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 09/12/03  
 Date Made Active at EDR: 10/16/03  
 Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 09/15/03  
 Elapsed ASTM days: 31  
 Date of Last EDR Contact: 09/15/03

**WMUDS/SWAT: Waste Management Unit Database**

Source: State Water Resources Control Board  
 Telephone: 916-227-4448

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/00  
 Date Made Active at EDR: 05/10/00  
 Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 04/10/00  
 Elapsed ASTM days: 30  
 Date of Last EDR Contact: 09/12/03

**LUST: Leaking Underground Storage Tank Information System**

Source: State Water Resources Control Board  
 Telephone: 916-341-5740

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 04/02/03  
 Date Made Active at EDR: 04/25/03  
 Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 04/16/03  
 Elapsed ASTM days: 9  
 Date of Last EDR Contact: 10/14/03

**CA BOND EXP. PLAN: Bond Expenditure Plan**

Source: Department of Health Services  
 Telephone: 916-255-2118

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/89  
 Date Made Active at EDR: 08/02/94  
 Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 07/27/94  
 Elapsed ASTM days: 6  
 Date of Last EDR Contact: 05/31/94

**CA UST:**

**UST: Active UST Facilities**

Source: SWRCB  
 Telephone: 916-341-5700

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 04/02/03  
 Date Made Active at EDR: 04/30/03  
 Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 04/16/03  
 Elapsed ASTM days: 14  
 Date of Last EDR Contact: 10/14/03

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

**VCP: Voluntary Cleanup Program Properties**

Source: Department of Toxic Substances Control  
Telephone: 916-323-3400

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 08/31/03  
Date Made Active at EDR: 09/17/03  
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 09/02/03  
Elapsed ASTM days: 15  
Date of Last EDR Contact: 09/02/03

**INDIAN UST: Underground Storage Tanks on Indian Land**

Source: EPA Region 9  
Telephone: 415-972-3368

Date of Government Version: N/A  
Date Made Active at EDR: N/A  
Database Release Frequency: Varies

Date of Data Arrival at EDR: N/A  
Elapsed ASTM days: 0  
Date of Last EDR Contact: N/A

**CA FID UST: Facility Inventory Database**

Source: California Environmental Protection Agency  
Telephone: 916-445-6532

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/94  
Date Made Active at EDR: 09/29/95  
Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 09/05/95  
Elapsed ASTM days: 24  
Date of Last EDR Contact: 12/28/98

**HIST UST: Hazardous Substance Storage Container Database**

Source: State Water Resources Control Board  
Telephone: 916-341-5700

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/90  
Date Made Active at EDR: 02/12/91  
Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 01/25/91  
Elapsed ASTM days: 18  
Date of Last EDR Contact: 07/26/01

**STATE OF CALIFORNIA ASTM SUPPLEMENTAL RECORDS****AST: Aboveground Petroleum Storage Tank Facilities**

Source: State Water Resources Control Board  
Telephone: 916-341-5712  
Registered Aboveground Storage Tanks.

Date of Government Version: 07/01/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 11/03/03  
Date of Next Scheduled EDR Contact: 02/02/04

**CLEANERS: Cleaner Facilities**

Source: Department of Toxic Substance Control  
Telephone: 916-225-0873

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial laundries; laundry and garment services.

Date of Government Version: 03/11/03  
Database Release Frequency: Annually

Date of Last EDR Contact: 10/20/03  
Date of Next Scheduled EDR Contact: 01/05/04



## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

**CA WDS: Waste Discharge System**

Source: State Water Resources Control Board  
Telephone: 916-657-1571

Sites which have been issued waste discharge requirements.

Date of Government Version: 09/22/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/24/03  
Date of Next Scheduled EDR Contact: 12/22/03

**DEED: List of Deed Restrictions**

Source: Department of Toxic Substances Control  
Telephone: 916-323-3400

The use of recorded land use restrictions is one of the methods the DTSC uses to protect the public from unsafe exposures to hazardous substances and wastes.

Date of Government Version: 10/07/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 10/08/03  
Date of Next Scheduled EDR Contact: 01/05/04

**NFA: No Further Action Determination**

Source: Department of Toxic Substances Control  
Telephone: 916-323-3400

This category contains properties at which DTSC has made a clear determination that the property does not pose a problem to the environment or to public health.

Date of Government Version: 08/31/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/02/03  
Date of Next Scheduled EDR Contact: 12/01/03

**EMI: Emissions Inventory Data**

Source: California Air Resources Board  
Telephone: 916-322-2990

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/01  
Database Release Frequency: Varies

Date of Last EDR Contact: 10/20/03  
Date of Next Scheduled EDR Contact: 01/19/04

**REF: Unconfirmed Properties Referred to Another Agency**

Source: Department of Toxic Substances Control  
Telephone: 916-323-3400

This category contains properties where contamination has not been confirmed and which were determined as not requiring direct DTSC Site Mitigation Program action or oversight. Accordingly, these sites have been referred to another state or local regulatory agency.

Date of Government Version: 08/31/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/02/03  
Date of Next Scheduled EDR Contact: 12/01/03

**SCH: School Property Evaluation Program**

Source: Department of Toxic Substances Control  
Telephone: 916-323-3400

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 08/31/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/02/03  
Date of Next Scheduled EDR Contact: 12/01/03

**NFE: Properties Needing Further Evaluation**

Source: Department of Toxic Substances Control  
Telephone: 916-323-3400

This category contains properties that are suspected of being contaminated. These are unconfirmed contaminated properties that need to be assessed using the PEA process. PEA in Progress indicates properties where DTSC is currently conducting a PEA. PEA Required indicates properties where DTSC has determined a PEA is required, but not currently underway.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 08/31/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/02/03  
Date of Next Scheduled EDR Contact: 12/01/03

**HAZNET: Hazardous Waste Information System**

Source: California Environmental Protection Agency  
Telephone: 916-255-1136

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method.

Date of Government Version: 12/31/01  
Database Release Frequency: Annually

Date of Last EDR Contact: 11/11/03  
Date of Next Scheduled EDR Contact: 02/09/04

**LOCAL RECORDS**

**ALAMEDA COUNTY:**

**Local Oversight Program Listing of UGT Cleanup Sites**

Source: Alameda County Environmental Health Services  
Telephone: 510-567-6700

Date of Government Version: 07/03/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 10/27/03  
Date of Next Scheduled EDR Contact: 01/26/04

**Underground Tanks**

Source: Alameda County Environmental Health Services  
Telephone: 510-567-6700

Date of Government Version: 07/03/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 10/27/03  
Date of Next Scheduled EDR Contact: 01/26/04

**CONTRA COSTA COUNTY:**

**Site List**

Source: Contra Costa Health Services Department  
Telephone: 925-646-2286

List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 09/04/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 09/02/03  
Date of Next Scheduled EDR Contact: 12/01/03

**FRESNO COUNTY:**

**CUPA Resources List**

Source: Dept. of Community Health  
Telephone: 559-445-3271

Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 10/07/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 10/08/03  
Date of Next Scheduled EDR Contact: 02/09/04



## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

### KERN COUNTY:

#### Underground Storage Tank Sites & Tank Listing

Source: Kern County Environment Health Services Department  
Telephone: 661-862-8700  
Kern County Sites and Tanks Listing.

Date of Government Version: 07/25/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/08/03  
Date of Next Scheduled EDR Contact: 12/08/03

### LOS ANGELES COUNTY:

#### List of Solid Waste Facilities

Source: La County Department of Public Works  
Telephone: 818-458-5185

Date of Government Version: 06/03/03  
Database Release Frequency: Varies

Date of Last EDR Contact: 08/18/03  
Date of Next Scheduled EDR Contact: 11/17/03

#### City of El Segundo Underground Storage Tank

Source: City of El Segundo Fire Department  
Telephone: 310-524-2236

Date of Government Version: 09/11/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 11/17/03  
Date of Next Scheduled EDR Contact: 02/16/04

#### City of Long Beach Underground Storage Tank

Source: City of Long Beach Fire Department  
Telephone: 562-570-2543

Date of Government Version: 03/28/03  
Database Release Frequency: Annually

Date of Last EDR Contact: 11/24/03  
Date of Next Scheduled EDR Contact: 02/23/04

#### City of Torrance Underground Storage Tank

Source: City of Torrance Fire Department  
Telephone: 310-618-2973

Date of Government Version: 09/03/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 11/17/03  
Date of Next Scheduled EDR Contact: 02/16/04

#### City of Los Angeles Landfills

Source: Engineering & Construction Division  
Telephone: 213-473-7869

Date of Government Version: 03/01/02  
Database Release Frequency: Varies

Date of Last EDR Contact: 09/15/03  
Date of Next Scheduled EDR Contact: 12/15/03

#### HMS: Street Number List

Source: Department of Public Works  
Telephone: 626-458-3517  
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 09/30/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 11/17/03  
Date of Next Scheduled EDR Contact: 02/16/04

#### Site Mitigation List

Source: Community Health Services  
Telephone: 323-890-7806  
Industrial sites that have had some sort of spill or complaint.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 01/07/03  
Database Release Frequency: Annually

Date of Last EDR Contact: 11/17/03  
Date of Next Scheduled EDR Contact: 02/16/04

### San Gabriel Valley Areas of Concern

Source: EPA Region 9  
Telephone: 415-972-3178

San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 12/31/98  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 07/06/99  
Date of Next Scheduled EDR Contact: N/A

### MARIN COUNTY:

#### Underground Storage Tank Sites

Source: Public Works Department Waste Management  
Telephone: 415-499-6647  
Currently permitted USTs in Marin County.

Date of Government Version: 08/19/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 11/03/03  
Date of Next Scheduled EDR Contact: 02/02/04

### NAPA COUNTY:

#### Sites With Reported Contamination

Source: Napa County Department of Environmental Management  
Telephone: 707-253-4269

Date of Government Version: 10/02/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 09/30/03  
Date of Next Scheduled EDR Contact: 12/29/03

#### Closed and Operating Underground Storage Tank Sites

Source: Napa County Department of Environmental Management  
Telephone: 707-253-4269

Date of Government Version: 10/02/03  
Database Release Frequency: Annually

Date of Last EDR Contact: 09/30/03  
Date of Next Scheduled EDR Contact: 12/29/03

### ORANGE COUNTY:

#### List of Underground Storage Tank Cleanups

Source: Health Care Agency  
Telephone: 714-834-3446  
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 07/01/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/11/03  
Date of Next Scheduled EDR Contact: 12/08/03

#### List of Underground Storage Tank Facilities

Source: Health Care Agency  
Telephone: 714-834-3446  
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 09/02/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/11/03  
Date of Next Scheduled EDR Contact: 12/08/03

#### List of Industrial Site Cleanups

Source: Health Care Agency  
Telephone: 714-834-3446  
Petroleum and non-petroleum spills.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/24/00  
Database Release Frequency: Annually

Date of Last EDR Contact: 09/11/03  
Date of Next Scheduled EDR Contact: 12/08/03

### PLACER COUNTY:

#### Master List of Facilities

Source: Placer County Health and Human Services  
Telephone: 530-889-7312  
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 10/16/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 09/23/03  
Date of Next Scheduled EDR Contact: 12/22/03

### RIVERSIDE COUNTY:

#### Listing of Underground Tank Cleanup Sites

Source: Department of Public Health  
Telephone: 909-358-5055  
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 06/03/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/20/03  
Date of Next Scheduled EDR Contact: 01/19/04

#### Underground Storage Tank Tank List

Source: Health Services Agency  
Telephone: 909-358-5055

Date of Government Version: 05/30/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/20/03  
Date of Next Scheduled EDR Contact: 01/19/04

### SACRAMENTO COUNTY:

#### CS - Contaminated Sites

Source: Sacramento County Environmental Management  
Telephone: 916-875-8406

Date of Government Version: 07/17/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 11/03/03  
Date of Next Scheduled EDR Contact: 02/02/04

#### ML - Regulatory Compliance Master List

Source: Sacramento County Environmental Management  
Telephone: 916-875-8406

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 07/17/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 11/03/03  
Date of Next Scheduled EDR Contact: 02/02/04

### SAN BERNARDINO COUNTY:

#### Hazardous Material Permits

Source: San Bernardino County Fire Department Hazardous Materials Division  
Telephone: 909-387-3041

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 09/30/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/09/03  
Date of Next Scheduled EDR Contact: 12/08/03

### SAN DIEGO COUNTY:

#### Solid Waste Facilities

Source: Department of Health Services  
Telephone: 619-338-2209  
San Diego County Solid Waste Facilities.

Date of Government Version: 08/01/00  
Database Release Frequency: Varies

Date of Last EDR Contact: 08/25/03  
Date of Next Scheduled EDR Contact: 11/24/03

#### Hazardous Materials Management Division Database

Source: Hazardous Materials Management Division  
Telephone: 619-338-2268

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 03/31/02  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/07/03  
Date of Next Scheduled EDR Contact: 01/05/04

### SAN FRANCISCO COUNTY:

#### Local Oversight Facilities

Source: Department Of Public Health San Francisco County  
Telephone: 415-252-3920

Date of Government Version: 09/11/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/08/03  
Date of Next Scheduled EDR Contact: 12/08/03

#### Underground Storage Tank Information

Source: Department of Public Health  
Telephone: 415-252-3920

Date of Government Version: 09/11/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/08/03  
Date of Next Scheduled EDR Contact: 12/08/03

### SAN MATEO COUNTY:

#### Fuel Leak List

Source: San Mateo County Environmental Health Services Division  
Telephone: 650-363-1921

Date of Government Version: 07/21/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 10/27/03  
Date of Next Scheduled EDR Contact: 01/26/04

#### Business Inventory

Source: San Mateo County Environmental Health Services Division  
Telephone: 650-363-1921  
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 06/16/03  
Database Release Frequency: Annually

Date of Last EDR Contact: 10/13/03  
Date of Next Scheduled EDR Contact: 01/12/04

### SANTA CLARA COUNTY:

#### Fuel Leak Site Activity Report

Source: Santa Clara Valley Water District  
Telephone: 408-265-2600

Date of Government Version: 07/02/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 09/30/03  
Date of Next Scheduled EDR Contact: 12/29/03

#### Hazardous Material Facilities

Source: City of San Jose Fire Department  
Telephone: 408-277-4659

Date of Government Version: 10/01/03  
Database Release Frequency: Annually

Date of Last EDR Contact: 09/08/03  
Date of Next Scheduled EDR Contact: 12/08/03

### SOLANO COUNTY:

#### Leaking Underground Storage Tanks

Source: Solano County Department of Environmental Management  
Telephone: 707-421-6770

Date of Government Version: 08/21/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/15/03  
Date of Next Scheduled EDR Contact: 12/15/03

#### Underground Storage Tanks

Source: Solano County Department of Environmental Management  
Telephone: 707-421-6770

Date of Government Version: 08/21/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/15/03  
Date of Next Scheduled EDR Contact: 12/15/03

### SONOMA COUNTY:

#### Leaking Underground Storage Tank Sites

Source: Department of Health Services  
Telephone: 707-565-6565

Date of Government Version: 10/01/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/27/03  
Date of Next Scheduled EDR Contact: 01/26/04

### SUTTER COUNTY:

#### Underground Storage Tanks

Source: Sutter County Department of Agriculture  
Telephone: 530-822-7500

Date of Government Version: 07/01/01  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 10/27/03  
Date of Next Scheduled EDR Contact: 01/05/04

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

### VENTURA COUNTY:

#### Inventory of Illegal Abandoned and Inactive Sites

Source: Environmental Health Division  
 Telephone: 805-654-2813  
 Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 09/01/02  
 Database Release Frequency: Annually

Date of Last EDR Contact: 08/26/03  
 Date of Next Scheduled EDR Contact: 11/24/03

#### Listing of Underground Tank Cleanup Sites

Source: Environmental Health Division  
 Telephone: 805-654-2813  
 Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 09/26/03  
 Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/15/03  
 Date of Next Scheduled EDR Contact: 12/15/03

#### Underground Tank Closed Sites List

Source: Environmental Health Division  
 Telephone: 805-654-2813  
 Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 07/30/03  
 Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/16/03  
 Date of Next Scheduled EDR Contact: 01/12/04

#### Business Plan, Hazardous Waste Producers, and Operating Underground Tanks

Source: Ventura County Environmental Health Division  
 Telephone: 805-654-2813  
 The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 09/02/03  
 Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/15/03  
 Date of Next Scheduled EDR Contact: 12/15/03

### YOLO COUNTY:

#### Underground Storage Tank Comprehensive Facility Report

Source: Yolo County Department of Health  
 Telephone: 530-666-8646

Date of Government Version: 06/19/03  
 Database Release Frequency: Annually

Date of Last EDR Contact: 10/20/03  
 Date of Next Scheduled EDR Contact: 01/19/04

#### California Regional Water Quality Control Board (RWQCB) LUST Records

##### LUST REG 1: Active Toxic Site Investigation

Source: California Regional Water Quality Control Board North Coast (1)  
 Telephone: 707-576-2220  
 Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/01  
 Database Release Frequency: No Update Planned

Date of Last EDR Contact: 08/25/03  
 Date of Next Scheduled EDR Contact: 11/24/03

##### LUST REG 2: Fuel Leak List

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)  
 Telephone: 510-286-0457

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 03/28/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/14/03  
Date of Next Scheduled EDR Contact: 01/12/04

**LUST REG 3:** Leaking Underground Storage Tank Database  
Source: California Regional Water Quality Control Board Central Coast Region (3)  
Telephone: 805-549-3147

Date of Government Version: 05/19/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 11/17/03  
Date of Next Scheduled EDR Contact: 02/16/04

**LUST REG 4:** Underground Storage Tank Leak List  
Source: California Regional Water Quality Control Board Los Angeles Region (4)  
Telephone: 213-266-6600  
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 08/09/01  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 09/30/03  
Date of Next Scheduled EDR Contact: 12/29/03

**LUST REG 5:** Leaking Underground Storage Tank Database  
Source: California Regional Water Quality Control Board Central Valley Region (5)  
Telephone: 916-255-3125

Date of Government Version: 07/01/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/16/03  
Date of Next Scheduled EDR Contact: 01/05/04

**LUST REG 6L:** Leaking Underground Storage Tank Case Listing  
Source: California Regional Water Quality Control Board Lahontan Region (6)  
Telephone: 916-542-5424  
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/03  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 09/08/03  
Date of Next Scheduled EDR Contact: 12/08/03

**LUST REG 6V:** Leaking Underground Storage Tank Case Listing  
Source: California Regional Water Quality Control Board Victorville Branch Office (6)  
Telephone: 760-346-7491

Date of Government Version: 05/29/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/07/03  
Date of Next Scheduled EDR Contact: 01/05/04

**LUST REG 7:** Leaking Underground Storage Tank Case Listing  
Source: California Regional Water Quality Control Board Colorado River Basin Region (7)  
Telephone: 760-346-7491

Date of Government Version: 07/02/02  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 09/30/03  
Date of Next Scheduled EDR Contact: 12/29/03

**LUST REG 8:** Leaking Underground Storage Tanks  
Source: California Regional Water Quality Control Board Santa Ana Region (8)  
Telephone: 909-782-4498  
California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/16/03  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 11/12/03  
Date of Next Scheduled EDR Contact: 02/09/04

**LUST REG 9:** Leaking Underground Storage Tank Report  
Source: California Regional Water Quality Control Board San Diego Region (9)  
Telephone: 858-467-2980  
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.



## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 03/01/01  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 10/20/03  
Date of Next Scheduled EDR Contact: 01/19/04

### California Regional Water Quality Control Board (RWQCB) SLIC Records

#### SLIC REG 1: Active Toxic Site Investigations

Source: California Regional Water Quality Control Board, North Coast Region (1)  
Telephone: 707-576-2220

Date of Government Version: 04/03/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 08/25/03  
Date of Next Scheduled EDR Contact: 11/24/03

#### SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Source: Regional Water Quality Control Board San Francisco Bay Region (2)  
Telephone: 510-286-0457

Any contaminated site that impacts groundwater or has the potential to impact groundwater.

Date of Government Version: 03/28/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/14/03  
Date of Next Scheduled EDR Contact: 01/12/04

#### SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Source: California Regional Water Quality Control Board Central Coast Region (3)  
Telephone: 805-549-3147

Any contaminated site that impacts groundwater or has the potential to impact groundwater.

Date of Government Version: 09/16/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 11/17/03  
Date of Next Scheduled EDR Contact: 02/16/04

#### SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Source: Region Water Quality Control Board Los Angeles Region (4)  
Telephone: 213-576-6600

Any contaminated site that impacts groundwater or has the potential to impact groundwater.

Date of Government Version: 10/01/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/27/03  
Date of Next Scheduled EDR Contact: 01/26/04

#### SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Source: Regional Water Quality Control Board Central Valley Region (5)  
Telephone: 916-855-3075

Unregulated sites that impact groundwater or have the potential to impact groundwater.

Date of Government Version: 10/20/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 10/07/03  
Date of Next Scheduled EDR Contact: 01/05/04

#### SLIC REG 6L: SLIC Sites

Source: California Regional Water Quality Control Board, Lahontan Region  
Telephone: 530-542-5574

Date of Government Version: 09/09/03  
Database Release Frequency: Varies

Date of Last EDR Contact: 09/08/03  
Date of Next Scheduled EDR Contact: 12/08/03

#### SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Source: Regional Water Quality Control Board, Victorville Branch  
Telephone: 619-241-6583

Date of Government Version: 05/08/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 10/07/03  
Date of Next Scheduled EDR Contact: 01/05/04

#### SLIC REG 7: SLIC List

Source: California Regional Quality Control Board, Colorado River Basin Region  
Telephone: 760-346-7491



## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 05/29/03  
Database Release Frequency: Varies

Date of Last EDR Contact: 09/08/03  
Date of Next Scheduled EDR Contact: 11/24/03

**SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing**  
Source: California Region Water Quality Control Board Santa Ana Region (8)  
Telephone: 909-782-3298

Date of Government Version: 04/01/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 10/20/03  
Date of Next Scheduled EDR Contact: 01/05/04

**SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing**  
Source: California Regional Water Quality Control Board San Diego Region (9)  
Telephone: 858-467-2980

Date of Government Version: 09/08/03  
Database Release Frequency: Annually

Date of Last EDR Contact: 09/02/03  
Date of Next Scheduled EDR Contact: 12/01/03

### EDR PROPRIETARY HISTORICAL DATABASES

**EDR Historical Gas Station and Dry Cleaners:** EDR has searched select national collections of business directories and has collected listings of potential dry cleaner and gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning and gas station/filling station/service station establishments. The categories reviewed included, but were not limited to: *gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, dry cleaner, cleaners, laundry, laundromat, cleaning/laundry, wash & dry, etc.*

This information is meant to assist and complement environmental professionals in their conduct of environmental site assessments, and is not meant to be a substitute for a full historical investigation as defined in ASTM E1527. The information provided in this proprietary database may or may not be complete; i.e., the absence of a dry cleaner or gas station/filling station/service station site does not necessarily mean that such a site did not exist in the area covered by this report.

*(A note on "dry cleaning" sites: it is not possible for EDR to differentiate between establishments that use PERC on-site as a cleaning solvent and sites that function simply as drop-off and pick-up locations or that are traditional wet cleaning/laundry facilities. Therefore, it is essential for environmental professionals to incorporate professional judgment in the evaluation of each site.)*

**Former Manufactured Gas (Coal Gas) Sites:** The existence and location of Coal Gas sites is provided exclusively to EDR by Real Property Scan, Inc. ©Copyright 1993 Real Property Scan, Inc. For a technical description of the types of hazards which may be found at such sites, contact your EDR customer service representative.

#### Disclaimer Provided by Real Property Scan, Inc.

The information contained in this report has predominantly been obtained from publicly available sources produced by entities other than Real Property Scan. While reasonable steps have been taken to insure the accuracy of this report, Real Property Scan does not guarantee the accuracy of this report. Any liability on the part of Real Property Scan is strictly limited to a refund of the amount paid. No claim is made for the actual existence of toxins at any site. This report does not constitute a legal opinion.

### BROWNFIELDS DATABASES

**VCP: Voluntary Cleanup Program Properties**  
Source: Department of Toxic Substances Control  
Telephone: 916-323-3400

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 08/31/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/02/03  
Date of Next Scheduled EDR Contact: 12/01/03

### US BROWNFIELDS: A Listing of Brownfields Sites

Source: Environmental Protection Agency  
Telephone: 202-566-2777

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become BCRLF cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: N/A  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: N/A  
Date of Next Scheduled EDR Contact: N/A

### OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

**Oil/Gas Pipelines:** This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

### Electric Power Transmission Line Data

Source: PennWell Corporation  
Telephone: (800) 823-6277

This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

**Sensitive Receptors:** There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

### AHA Hospitals:

Source: American Hospital Association, Inc.  
Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

### Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services  
Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

### Nursing Homes

Source: National Institutes of Health  
Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

### Public Schools

Source: National Center for Education Statistics  
Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

### **Private Schools**

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

### **Daycare Centers: Licensed Facilities**

Source: Department of Social Services

Telephone: 916-657-4041

**Flood Zone Data:** This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

**NWI:** National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

### **STREET AND ADDRESS INFORMATION**

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## GEOCHECK® - PHYSICAL SETTING SOURCE ADDENDUM

### TARGET PROPERTY ADDRESS

830 PRATT AVENUE  
830 PRATT AVENUE  
ST. HELENA, CA 94574

### TARGET PROPERTY COORDINATES

|                                |                             |
|--------------------------------|-----------------------------|
| Latitude (North):              | 38.513401 - 38° 30' 48.2"   |
| Longitude (West):              | 122.474998 - 122° 28' 30.0" |
| Universal Transverse Mercator: | Zone 10                     |
| UTM X (Meters):                | 545771.7                    |
| UTM Y (Meters):                | 4262704.0                   |
| Elevation:                     | 248 ft. above sea level     |

EDR's GeoCheck Physical Setting Source Addendum has been developed to assist the environmental professional with the collection of physical setting source information in accordance with ASTM 1527-00, Section 7.2.3. Section 7.2.3 requires that a current USGS 7.5 Minute Topographic Map (or equivalent, such as the USGS Digital Elevation Model) be reviewed. It also requires that one or more additional physical setting sources be sought when (1) conditions have been identified in which hazardous substances or petroleum products are likely to migrate to or from the property, and (2) more information than is provided in the current USGS 7.5 Minute Topographic Map (or equivalent) is generally obtained, pursuant to local good commercial or customary practice, to assess the impact of migration of recognized environmental conditions in connection with the property. Such additional physical setting sources generally include information about the topographic, hydrologic, hydrogeologic, and geologic characteristics of a site, and wells in the area.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata. EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

### GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

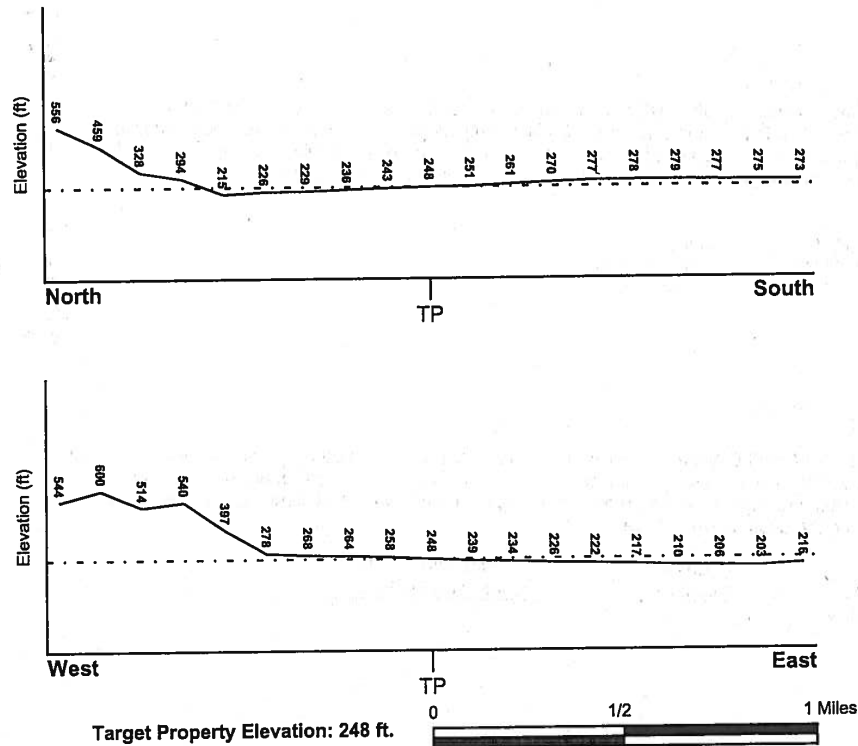
### TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

### TARGET PROPERTY TOPOGRAPHY

|                               |                             |
|-------------------------------|-----------------------------|
| USGS Topographic Map:         | 2438122-E4 SAINT HELENA, CA |
| General Topographic Gradient: | General NE                  |
| Source:                       | USGS 7.5 min quad index     |

### SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

### HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

### FEMA FLOOD ZONE

|                                           |                                                                                        |
|-------------------------------------------|----------------------------------------------------------------------------------------|
| <u>Target Property County</u><br>NAPA, CA | FEMA Flood<br><u>Electronic Data</u><br>YES - refer to the Overview Map and Detail Map |
| Flood Plain Panel at Target Property:     | 0602080005C                                                                            |
| Additional Panels in search area:         | 0602050275A<br>0602050250A                                                             |

### NATIONAL WETLAND INVENTORY

|                                                    |                                                         |
|----------------------------------------------------|---------------------------------------------------------|
| <u>NWI Quad at Target Property</u><br>SAINT HELENA | NWI Electronic<br><u>Data Coverage</u><br>Not Available |
|----------------------------------------------------|---------------------------------------------------------|

### HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

#### Site-Specific Hydrogeological Data\*:

|                |            |
|----------------|------------|
| Search Radius: | 1.25 miles |
| Status:        | Not found  |

### AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

| <u>MAP ID</u> | <u>LOCATION FROM TP</u> | <u>GENERAL DIRECTION GROUNDWATER FLOW</u> |
|---------------|-------------------------|-------------------------------------------|
| Not Reported  |                         |                                           |

\* ©1996 Site-specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

### GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

### GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

#### **ROCK STRATIGRAPHIC UNIT**

|         |                                             |
|---------|---------------------------------------------|
| Era:    | Cenozoic                                    |
| System: | Tertiary                                    |
| Series: | Pliocene volcanic rocks                     |
| Code:   | Tpv (decoded above as Era, System & Series) |

#### **GEOLOGIC AGE IDENTIFICATION**

Category: Volcanic Rocks

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

### DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

|                       |                                                                                                                                                    |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Soil Component Name:  | BALE                                                                                                                                               |
| Soil Surface Texture: | clay loam                                                                                                                                          |
| Hydrologic Group:     | Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.           |
| Soil Drainage Class:  | Somewhat poorly. Soils commonly have a layer with low hydraulic conductivity, wet state high in profile, etc. Depth to water table is 1 to 3 feet. |

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: MODERATE

Depth to Bedrock Min: > 60 inches

Depth to Bedrock Max: > 60 inches



# **GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY**

| Soil Layer Information |           |           |                    |                                                                                         |                                                                                                                                                      |                           |                        |
|------------------------|-----------|-----------|--------------------|-----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|------------------------|
| Layer                  | Boundary  |           | Soil Texture Class | Classification                                                                          |                                                                                                                                                      | Permeability Rate (in/hr) | Soil Reaction (pH)     |
|                        | Upper     | Lower     |                    | AASHTO Group                                                                            | Unified Soil                                                                                                                                         |                           |                        |
| 1                      | 0 inches  | 24 inches | clay loam          | Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.                  | FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay                                                                          | Max: 2.00<br>Min: 0.60    | Max: 6.50<br>Min: 5.60 |
| 2                      | 24 inches | 44 inches | stratified         | Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.                   | FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt. | Max: 2.00<br>Min: 0.60    | Max: 7.80<br>Min: 6.10 |
| 3                      | 44 inches | 60 inches | stratified         | Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand. | COARSE-GRAINED SOILS, Gravels, Gravels with fines, Silty Gravel                                                                                      | Max: 2.00<br>Min: 0.60    | Max: 7.80<br>Min: 6.10 |

## **OTHER SOIL TYPES IN AREA**

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: silt loam  
loam  
very gravelly - loam  
very stony - loam  
gravelly - loam  
very gravelly - sand  
clay  
silty clay loam

Surficial Soil Types: silt loam  
loam  
very gravelly - loam  
very stony - loam  
gravelly - loam  
very gravelly - sand  
clay  
silty clay loam

Shallow Soil Types: sandy clay loam  
gravelly - loam



## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

gravelly - clay loam  
sandy loam  
clay loam

Deeper Soil Types: silty clay loam  
gravelly - fine sandy loam  
silt loam  
clay  
weathered bedrock  
sand and gravel  
cobble - clay loam

### ADDITIONAL ENVIRONMENTAL RECORD SOURCES

According to ASTM E 1527-00, Section 7.2.2, "one or more additional state or local sources of environmental records may be checked, in the discretion of the environmental professional, to enhance and supplement federal and state sources... Factors to consider in determining which local or additional state records, if any, should be checked include (1) whether they are reasonably ascertainable, (2) whether they are sufficiently useful, accurate, and complete in light of the objective of the records review (see 7.1.1), and (3) whether they are obtained, pursuant to local, good commercial or customary practice." One of the record sources listed in Section 7.2.2 is water well information. Water well information can be used to assist the environmental professional in assessing sources that may impact groundwater flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

### WELL SEARCH DISTANCE INFORMATION

| <u>DATABASE</u>  | <u>SEARCH DISTANCE (miles)</u> |
|------------------|--------------------------------|
| Federal USGS     | 1.000                          |
| Federal FRDS PWS | Nearest PWS within 1 mile      |
| State Database   | 1.000                          |

### FEDERAL USGS WELL INFORMATION

| <u>MAP ID</u> | <u>WELL ID</u> | <u>LOCATION FROM TP</u> |
|---------------|----------------|-------------------------|
| 1             | USGS0146968    | 1/4 - 1/2 Mile North    |
| 5             | USGS0146969    | 1/2 - 1 Mile NW         |

### FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

| <u>MAP ID</u> | <u>WELL ID</u> | <u>LOCATION FROM TP</u> |
|---------------|----------------|-------------------------|
| 2             | CA1700507      | 1/2 - 1 Mile SSE        |

Note: PWS System location is not always the same as well location.

### STATE DATABASE WELL INFORMATION

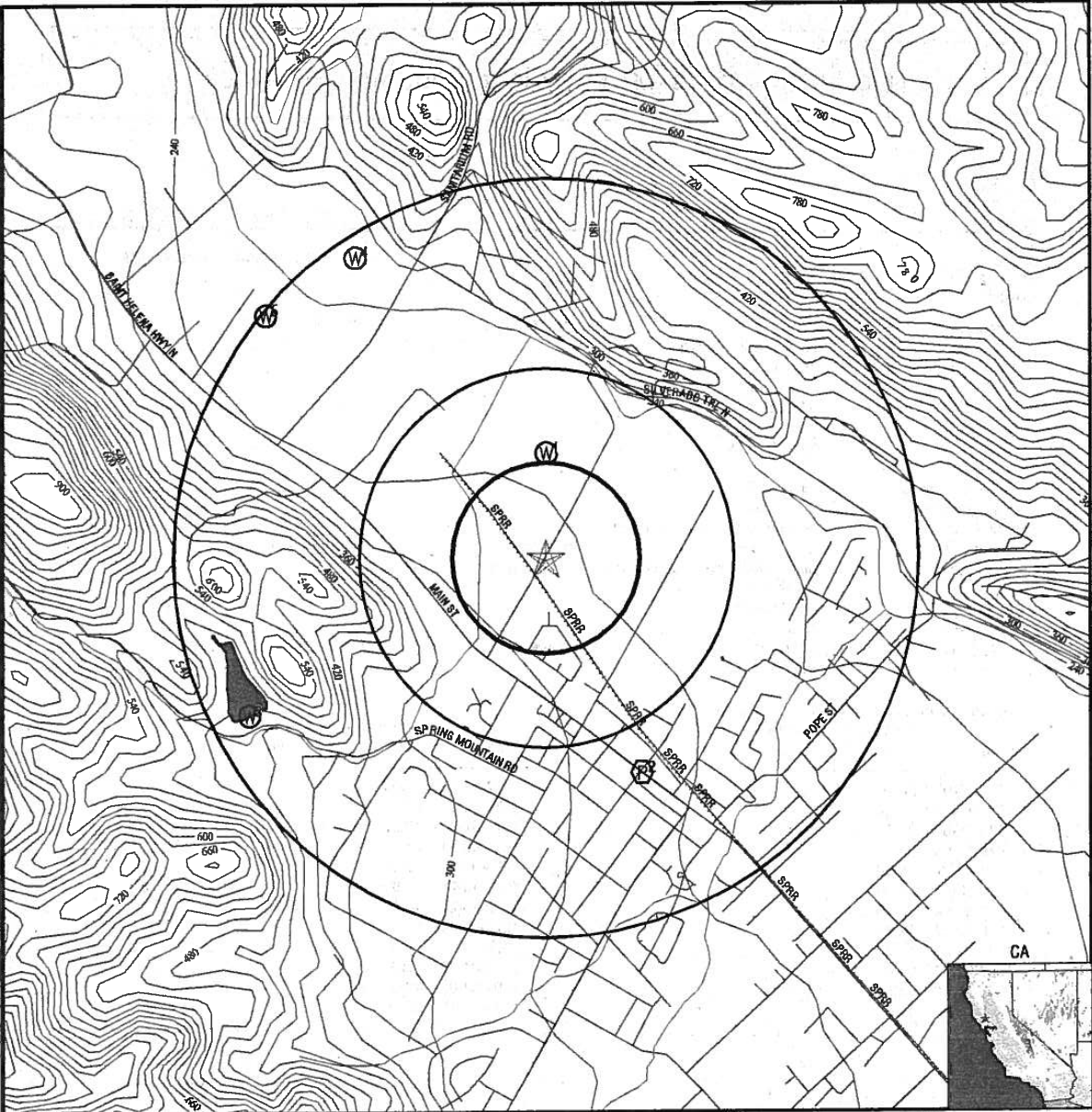
| <u>MAP ID</u> | <u>WELL ID</u> | <u>LOCATION FROM TP</u> |
|---------------|----------------|-------------------------|
|---------------|----------------|-------------------------|

**GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY**

**STATE DATABASE WELL INFORMATION**

| MAP ID | WELL ID | LOCATION<br>FROM TP |
|--------|---------|---------------------|
| 3      | 22250   | 1/2 - 1 Mile WSW    |
| 4      | 8368    | 1/2 - 1 Mile NNW    |

PHYSICAL SETTING SOURCE MAP - 1089548.4s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Closest Hydrogeological Data
- Oil, gas or related wells

|                  |                     |            |                           |
|------------------|---------------------|------------|---------------------------|
| TARGET PROPERTY: | 830 Pratt Avenue    | CUSTOMER:  | Kleinfelder, Inc.         |
| ADDRESS:         | 830 Pratt Avenue    | CONTACT:   | Jennifer Gomez            |
| CITY/STATE/ZIP:  | St. Helena CA 94574 | INQUIRY #: | 1089548.4s                |
| LAT/LONG:        | 38.5134 / 122.4750  | DATE:      | November 26, 2003 1:01 pm |

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# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database EDR ID Number

1  
North  
1/4 - 1/2 Mile  
Lower

FED USGS USGS0146968

|                  |                                                  |             |                 |
|------------------|--------------------------------------------------|-------------|-----------------|
| Agency:          | USGS                                             | Site ID:    | 383103122282601 |
| Site Name:       | 008N006W25G002M                                  |             |                 |
| Dec. Latitude:   | 38.51741                                         |             |                 |
| Dec. Longitude:  | -122.47498                                       |             |                 |
| Coord Sys:       | NAD83                                            |             |                 |
| State:           | CA                                               |             |                 |
| County:          | Napa County                                      |             |                 |
| Altitude:        | 230                                              |             |                 |
| Hydrologic code: | 18050002                                         |             |                 |
| Topographic:     | Valley flat                                      |             |                 |
| Site Type:       | Ground-water other than Spring                   |             |                 |
| Const Date:      | Not Reported                                     | Inven Date: | Not Reported    |
| Well Type:       | Single well, other than collector or Ranney type |             |                 |
| Primary Aquifer: | Not Reported                                     |             |                 |
| Aquifer type:    | Not Reported                                     |             |                 |
| Well depth:      | 35.0                                             |             |                 |
| Hole depth:      | Not Reported                                     | Source:     | Not Reported    |
| Project no:      | Not Reported                                     |             |                 |

Ground-water levels, Number of Measurements: 24

| Date       | Feet below<br>Surface | Feet to<br>Sealevel | Date       | Feet below<br>Surface | Feet to<br>Sealevel |
|------------|-----------------------|---------------------|------------|-----------------------|---------------------|
| 1977-10-06 | 23.40                 |                     | 1977-01-28 | 16.50                 |                     |
| 1976-11-18 | 7.50                  |                     | 1976-08-04 | 29.20                 |                     |
| 1976-05-02 | 6.50                  |                     | 1976-02-04 | 18.50                 |                     |
| 1975-11-05 | 21.50                 |                     | 1975-07-14 | 27.00                 |                     |
| 1975-04-27 | 15.50                 |                     | 1974-07-31 | 10.00                 |                     |
| 1974-03-13 | 12.00                 |                     | 1973-10-24 | 19.90                 |                     |
| 1973-06-04 | 17.00                 |                     | 1972-10-24 | 16.50                 |                     |
| 1972-04-03 | 12.00                 |                     | 1971-03-29 | 10.60                 |                     |
| 1970-03-26 | 11.30                 |                     | 1969-03-27 | 7.90                  |                     |
| 1967-05-09 | 9.00                  |                     | 1966-04-30 | 7.50                  |                     |
| 1965-03-26 | 13.70                 |                     | 1964-04-07 | 4.20                  |                     |
| 1963-04-04 | 3.10                  |                     | 1949-10-18 | 37.50                 |                     |

2  
SSE  
1/2 - 1 Mile  
Higher

FRDS PWS CA1700507

|                       |                                                                                                     |                   |              |
|-----------------------|-----------------------------------------------------------------------------------------------------|-------------------|--------------|
| PWS ID:               | CA1700507                                                                                           | PWS Status:       | Active       |
| Date Initiated:       | 8411                                                                                                | Date Deactivated: | Not Reported |
| PWS Name:             | INTERMOUNTAIN SPORTS CAMP<br>CAMP INDIAN MEADOWS WATER SYS<br>BOTTLEROCK RD<br>ST HELENA, CA 94574  |                   |              |
| Addressee / Facility: | System Owner/Responsible Party<br>CAMP INDIAN MEADOWS WATER SYS<br>P O BOX 1<br>ST HELENA, CA 94574 |                   |              |

# **GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS**

Facility Latitude: 38 30 19 Facility Longitude: 122 28 09  
 City Served: Not Reported  
 Treatment Class: Untreated Population: 00000150

PWS currently has or had major violation(s) or enforcement: Yes

Violations information not reported.

## **ENFORCEMENT INFORMATION:**

|                    |                                    |                   |                   |
|--------------------|------------------------------------|-------------------|-------------------|
| System Name:       | INTERMOUNTAIN SPORTS CAMP          |                   |                   |
| Violation Type:    | Initial Tap Sampling for Pb and Cu |                   |                   |
| Contaminant:       | LEAD & COPPER RULE                 |                   |                   |
| Compliance Period: | 1993-07-01 - 2015-12-31            | Analytical Value: | 0000000.000000000 |
| Violation ID:      | 95V0001                            | Enforcement ID:   | Not Reported      |
| Enforcement Date:  | Not Reported                       | Enf. Action:      | Not Reported      |

**3**  
**WSW**  
 1/2 - 1 Mile  
 Higher

**CA WELLS 22250**

## **Water System Information:**

|                                    |                                          |               |                       |
|------------------------------------|------------------------------------------|---------------|-----------------------|
| Prime Station Code:                | C28/004-LWRRESI                          | User ID:      | RXR                   |
| FRDS Number:                       | 2810004003                               | County:       | Napa                  |
| District Number:                   | 03                                       | Station Type: | RESV/AMBNT/MUN/INTAKE |
| Water Type:                        | Surface Water                            | Well Status:  | Inactive Raw          |
| Source Lat/Long:                   | 383027.2 1222919.3                       | Precision:    | 100 Feet (one Second) |
| Source Name:                       | LOWER RESERVOIR INTAKE - INACTIVE        |               |                       |
| System Number:                     | 2810004                                  |               |                       |
| System Name:                       | St. Helena, City of                      |               |                       |
| Organization That Operates System: | 1480 Main Street<br>St. Helena, CA 94574 |               |                       |
| Pop Served:                        | 7000                                     | Connections:  | 2231                  |
| Area Served:                       | Not Reported                             |               |                       |

**4**  
**NNW**  
 1/2 - 1 Mile  
 Lower

**CA WELLS 8368**

## **Water System Information:**

|                                    |                                |               |                       |
|------------------------------------|--------------------------------|---------------|-----------------------|
| Prime Station Code:                | 08N/06W-23J03 M                | User ID:      | 28C                   |
| FRDS Number:                       | 2800532001                     | County:       | Napa                  |
| District Number:                   | 58                             | Station Type: | WELL/AMBNT/MUN/INTAKE |
| Water Type:                        | Well/Groundwater               | Well Status:  | Active Raw            |
| Source Lat/Long:                   | 383130.0 1222900.0             | Precision:    | 0.5 Mile (30 Seconds) |
| Source Name:                       | WELL 01                        |               |                       |
| System Number:                     | 2800532                        |               |                       |
| System Name:                       | VAILIMA ESTATES MWC            |               |                       |
| Organization That Operates System: | Not Reported<br>NAPA, CA 95444 |               |                       |
| Pop Served:                        | 100                            | Connections:  | 1                     |
| Area Served:                       | Not Reported                   |               |                       |

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database EDR ID Number

5  
NW  
1/2 - 1 Mile  
Lower

FED USGS USGS0146969

|                  |                                                  |             |                 |
|------------------|--------------------------------------------------|-------------|-----------------|
| Agency:          | USGS                                             | Site ID:    | 383122122291601 |
| Site Name:       | 008N006W26B004M                                  |             |                 |
| Dec. Latitude:   | 38.52269                                         |             |                 |
| Dec. Longitude:  | -122.48887                                       |             |                 |
| Coord Sys:       | NAD83                                            |             |                 |
| State:           | CA                                               |             |                 |
| County:          | Napa County                                      |             |                 |
| Altitude:        | 225                                              |             |                 |
| Hydrologic code: | 18050002                                         |             |                 |
| Topographic:     | Valley flat                                      |             |                 |
| Site Type:       | Ground-water other than Spring                   |             |                 |
| Const Date:      | Not Reported                                     | Inven Date: | Not Reported    |
| Well Type:       | Single well, other than collector or Ranney type |             |                 |
| Primary Aquifer: | Not Reported                                     |             |                 |
| Aquifer type:    | Not Reported                                     |             |                 |
| Well depth:      | Not Reported                                     |             |                 |
| Hole depth:      | Not Reported                                     | Source:     | Not Reported    |
| Project no:      | Not Reported                                     |             |                 |

Ground-water levels, Number of Measurements: 9

| Date       | Feet below<br>Surface | Feet to<br>Sealevel | Date       | Feet below<br>Surface | Feet to<br>Sealevel |
|------------|-----------------------|---------------------|------------|-----------------------|---------------------|
| 1983-10-13 | 12.60                 |                     | 1983-04-08 | 3.20                  |                     |
| 1982-10-20 | 13.50                 |                     | 1982-03-26 | 6.60                  |                     |
| 1981-10-16 | 14.80                 |                     | 1980-09-16 | 12.10                 |                     |
| 1980-03-27 | 8.00                  |                     | 1979-10-01 | 26.00                 |                     |
| 1979-04-12 | 8.00                  |                     |            |                       |                     |

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

### AREA RADON INFORMATION

State Database: CA Radon

#### Radon Test Results

| Zip   | Total Sites | > 4 pCi/L | Pct. > 4 pCi/L |
|-------|-------------|-----------|----------------|
| 94574 | 5           | 0         | 0.00           |

Federal EPA Radon Zone for NAPA County: 3

Note: Zone 1 indoor average level > 4 pCi/L.  
 : Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.  
 : Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 94574

Number of sites tested: 2

| Area                    | Average Activity | % <4 pCi/L   | % 4-20 pCi/L | % >20 pCi/L  |
|-------------------------|------------------|--------------|--------------|--------------|
| Living Area - 1st Floor | 1.200 pCi/L      | 100%         | 0%           | 0%           |
| Living Area - 2nd Floor | Not Reported     | Not Reported | Not Reported | Not Reported |
| Basement                | 2.800 pCi/L      | 100%         | 0%           | 0%           |

## PHYSICAL SETTING SOURCE RECORDS SEARCHED

### TOPOGRAPHIC INFORMATION

#### **USGS 7.5' Digital Elevation Model (DEM)**

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002. 7.5-Minute DEMs correspond to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps.

### HYDROLOGIC INFORMATION

**Flood Zone Data:** This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

**NWI:** National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

### HYDROGEOLOGIC INFORMATION

#### **AQUIFLOW<sup>®</sup> Information System**

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

### GEOLOGIC INFORMATION

#### **Geologic Age and Rock Stratigraphic Unit**

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

#### **STATSGO: State Soil Geographic Database**

Source: Department of Agriculture, Natural Resources Conservation Services

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

### ADDITIONAL ENVIRONMENTAL RECORD SOURCES

#### **FEDERAL WATER WELLS**

##### **PWS: Public Water Systems**

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

##### **PWS ENF: Public Water Systems Violation and Enforcement Data**

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

##### **USGS Water Wells: USGS National Water Inventory System (NWIS)**

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.



## PHYSICAL SETTING SOURCE RECORDS SEARCHED

### STATE RECORDS

#### California Drinking Water Quality Database

Source: Department of Health Services

Telephone: 916-324-2319

The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

#### California Oil and Gas Well Locations for District 2, 3, 5 and 6

Source: Department of Conservation

Telephone: 916-323-1779

### RADON

#### State Database: CA Radon

Source: Department of Health Services

Telephone: 916-324-2208

Radon Database for California

#### Area Radon Information

Source: USGS

Telephone: 703-356-4020

The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

#### EPA Radon Zones

Source: EPA

Telephone: 703-356-4020

Sections 307 & 309 of IRRA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

### OTHER

#### Airport Landing Facilities: Private and public use landing facilities

Source: Federal Aviation Administration, 800-457-6656

#### Epicenters: World earthquake epicenters, Richter 5 or greater

Source: Department of Commerce, National Oceanic and Atmospheric Administration

**California Earthquake Fault Lines:** The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.



## **APPENDIX D**



**APPLICATION FOR AUTHORIZATION TO USE  
PHASE I ENVIRONMENTAL SITE ASSESSMENT  
APN 009-010-024  
830 PRATT AVENUE  
ST. HELENA, CALIFORNIA**

File Number: 38603

Report Date: December 15, 2003

TO: Kleinfelder, Inc.  
780 Chadbourne Road, Suite D  
Fairfield, California 94585  
Telephone: (707) 429-4070  
Fax: (707) 429-4162

**To Whom It May Concern:**

Applicant understands and agrees that the Phase I Environmental Site Assessment (ESA) for the subject site is a copyrighted document, that Kleinfelder, Inc., is the copyright owner and that unauthorized use or copying of the ESA is strictly prohibited without the express written permission of Kleinfelder, Inc. Applicant understands that Kleinfelder, Inc., may withhold such permission at its sole discretion, or grant such permission upon such terms and conditions as it deems acceptable.

Applicant agrees to accept the contractual terms and conditions between Kleinfelder, Inc. and Meibeyer Law Group, originally negotiated for preparation of this ESA. Use of this document without permission releases Kleinfelder, Inc. its owners, employees and subcontractors from any liability that may arise from use of this report.

---

**To be Completed by Applicant**

|                    |              |
|--------------------|--------------|
| (Company Name)     | (Print Name) |
| (Address)          | (Signature)  |
| (City, State, Zip) | (title)      |
| (Telephone)        | (date)       |
| (Fax)              |              |

---

**Approval of Original Client**

By:

|                         |        |
|-------------------------|--------|
| (Client Signature)      | (date) |
| (Client Name and Title) |        |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| For Kleinfelder, Inc.'s use only                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                             |
| <input type="checkbox"/> Approved for re-use with additional fee of \$ 75 per additional report copy<br><input type="checkbox"/> Approved for re-use with applicant's agreement to following conditions:<br>Applicant agrees to above terms and understands that findings discussed in report were based on available information and site conditions as noted at time of ESA<br><input type="checkbox"/> Disapproved, report needs to be updated | By: _____ Date: _____<br><div style="text-align: center;">(Kleinfelder, Inc. Manager)</div> |







# THE CULINARY INSTITUTE OF AMERICA AT PRATT AVENUE

830 PRATT AVENUE  
ST. HELENA, CALIFORNIA

USE PERMIT AND DESIGN REVIEW SUBMITTAL



Architectural  
Resources Group

Pier 9, The Embarcadero, Suite 107  
San Francisco, California 94111  
415 421 1680  
[argsf.com](http://argsf.com)



RESPONSE TO  
COMMENTS 9/2/2016

| NO. | DESCRIPTION | DATE |
|-----|-------------|------|
|-----|-------------|------|

REVISIONS

## THE CULINARY INSTITUTE OF AMERICA

AT PRATT AVENUE  
830 PRATT AVENUE  
ST. HELENA, CALIFORNIA

SHEET TITLE  
TITLE SHEET

CEQA VISUAL ANALYSIS

JULY 2016

PROJ NO.  
11208.03

DRAWN  
ZY

CHECKED  
NM

DRAWING NO.

T1.0  
SHEET OF

### PROJECT TEAM

#### CLIENT

CULINARY INSTITUTE OF AMERICA  
2555 MAIN STREET  
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#### HOUSING DEVELOPER

KIRCHHOFF COMPANIES  
191 WEST ROAD  
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SANTA ROSA, CA 95403

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T1.0 TITLE SHEET

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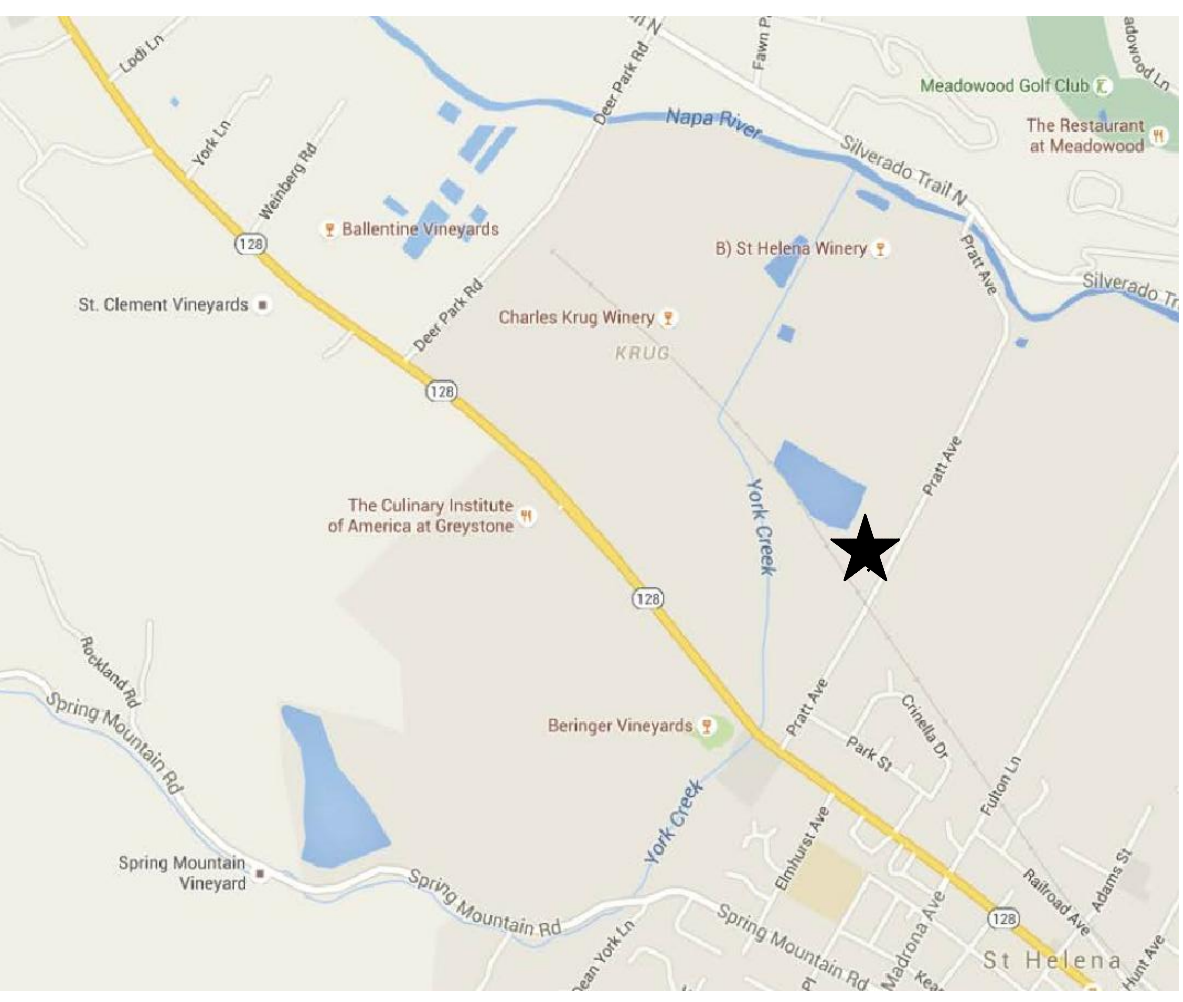
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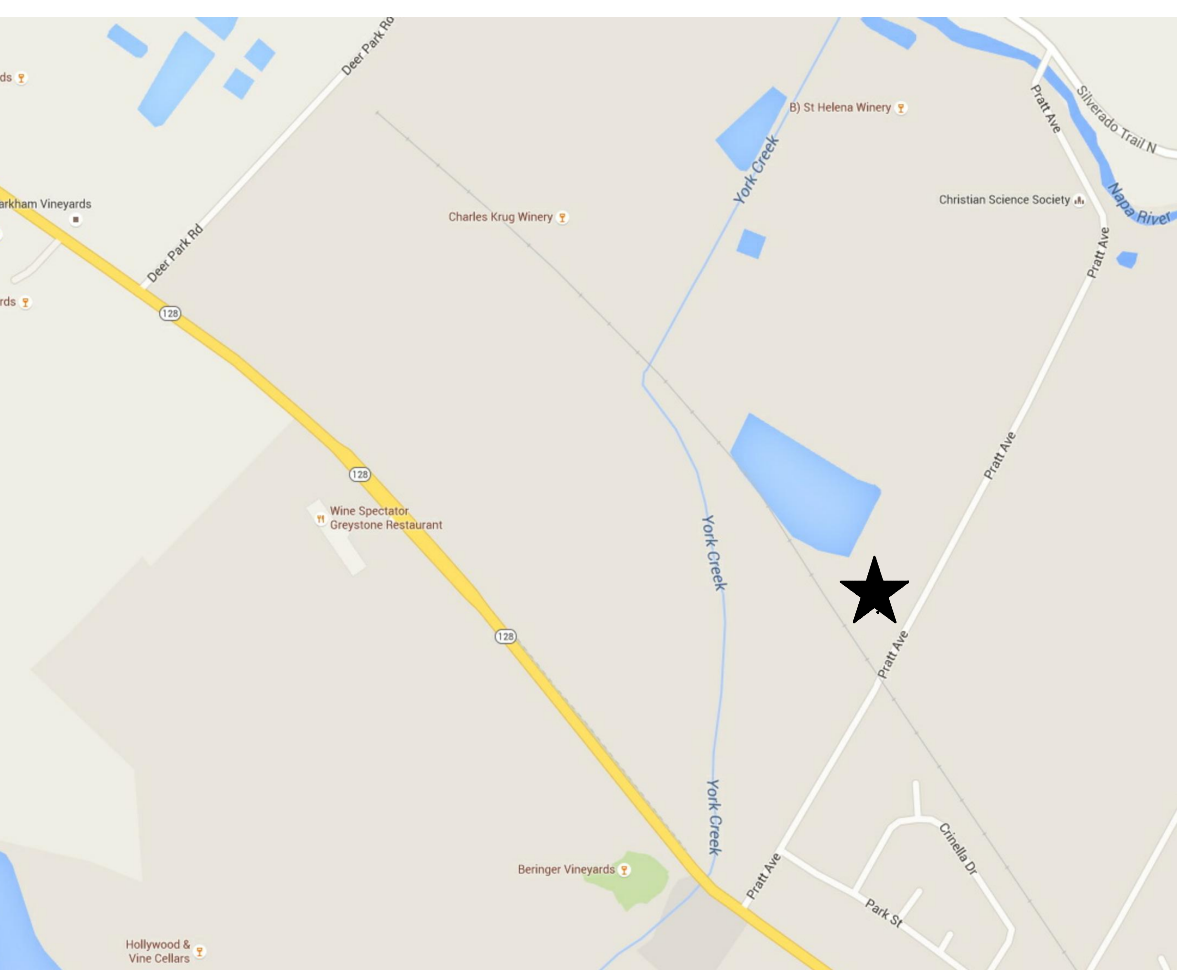
#### SITE CONTEXT PHOTOS

SP-1 SITE PHOTOS  
SP-2 SITE PHOTOS

### PROJECT LOCATION



### VICINITY MAP





**APPLICANT:**  
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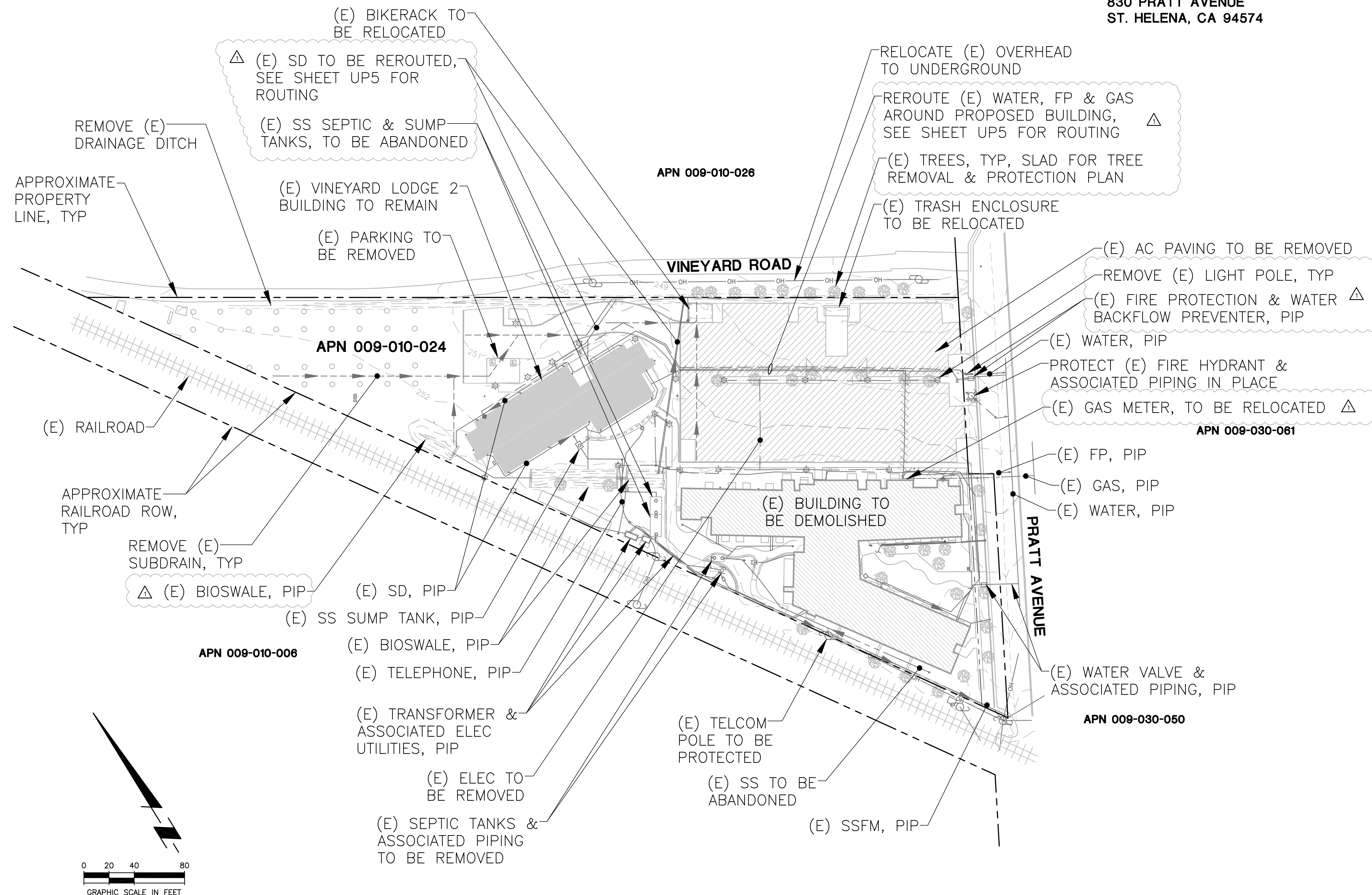
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SHEET TITLE

OVERALL SITE PLAN

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SUBMITTAL

6-21-2016

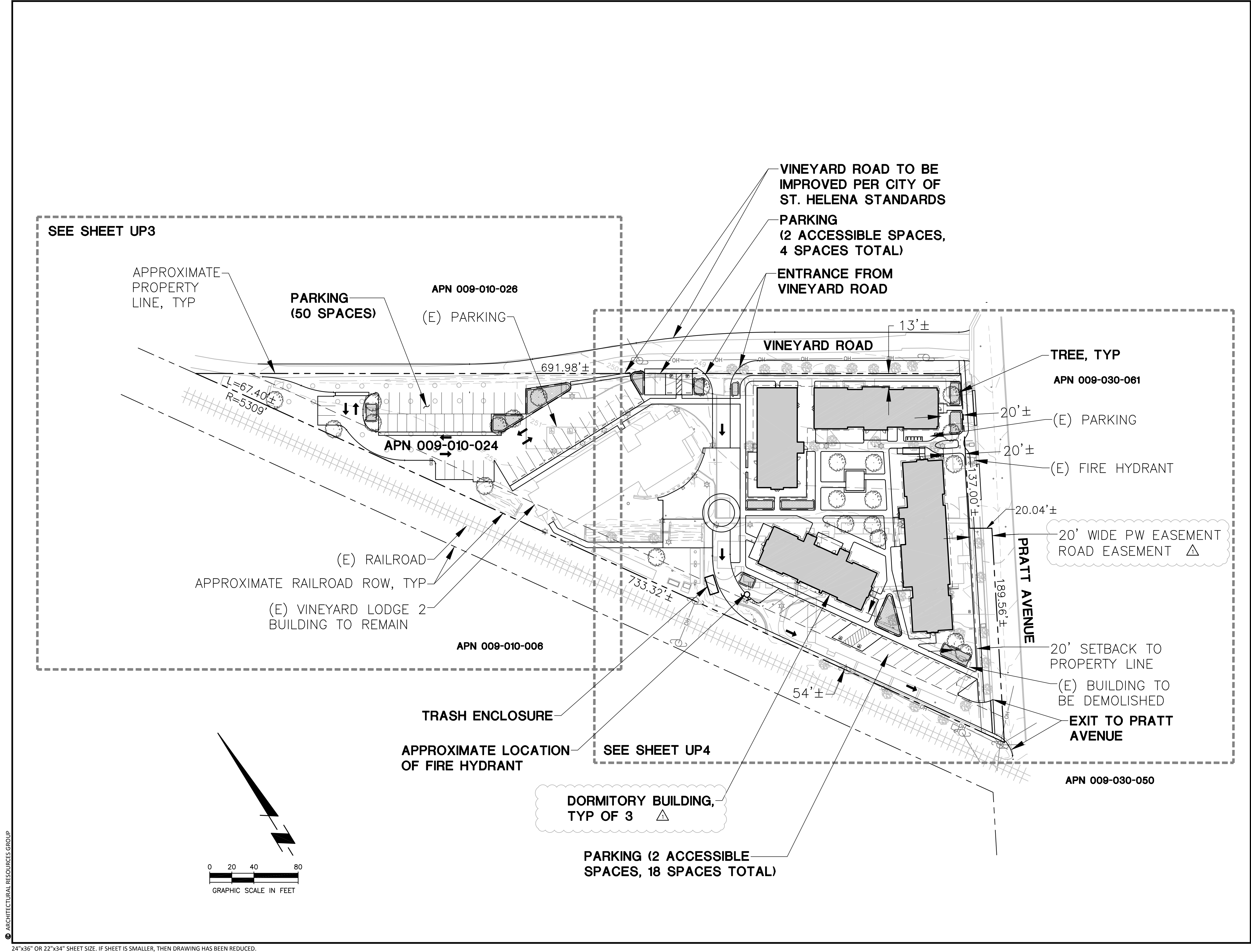
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UP2

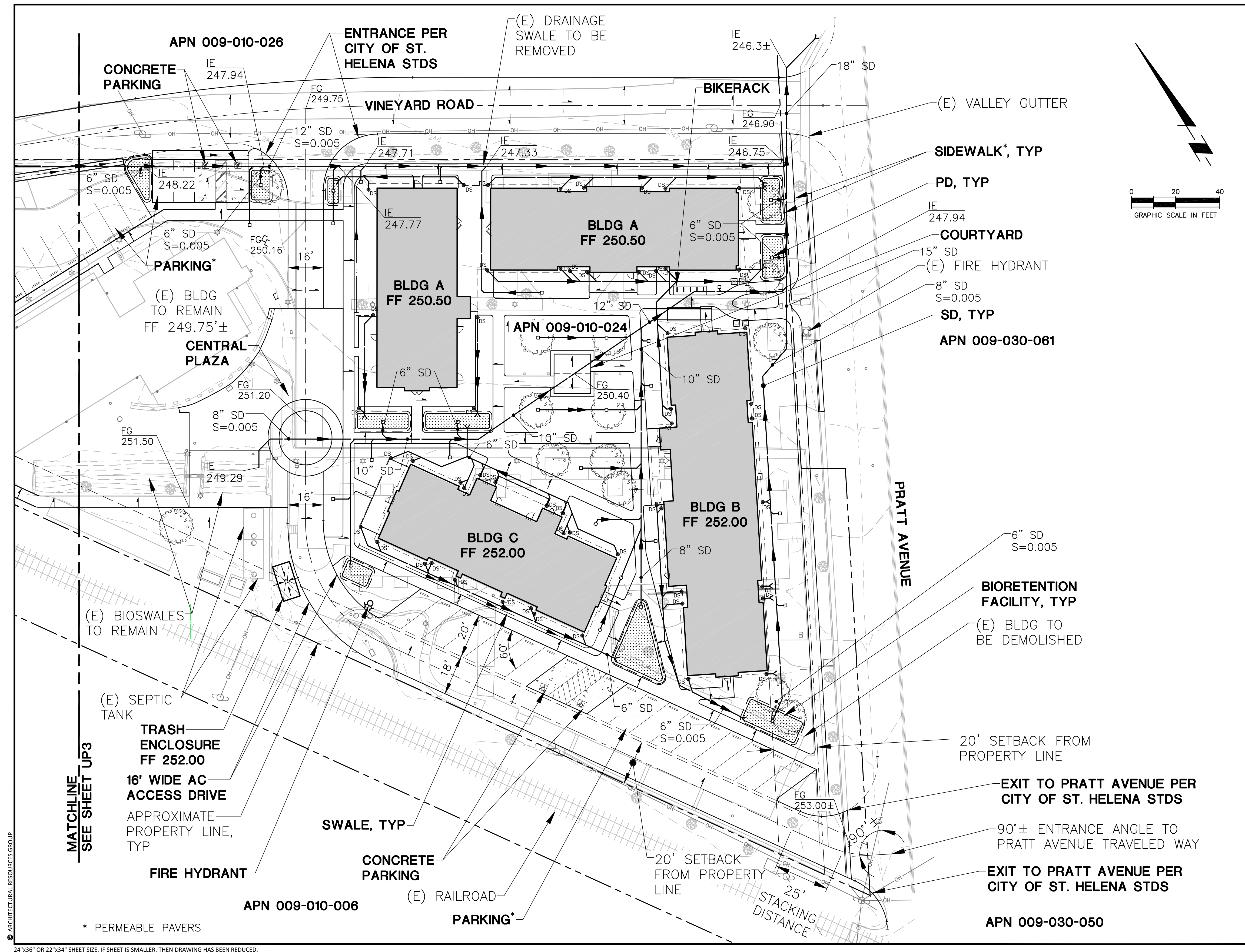


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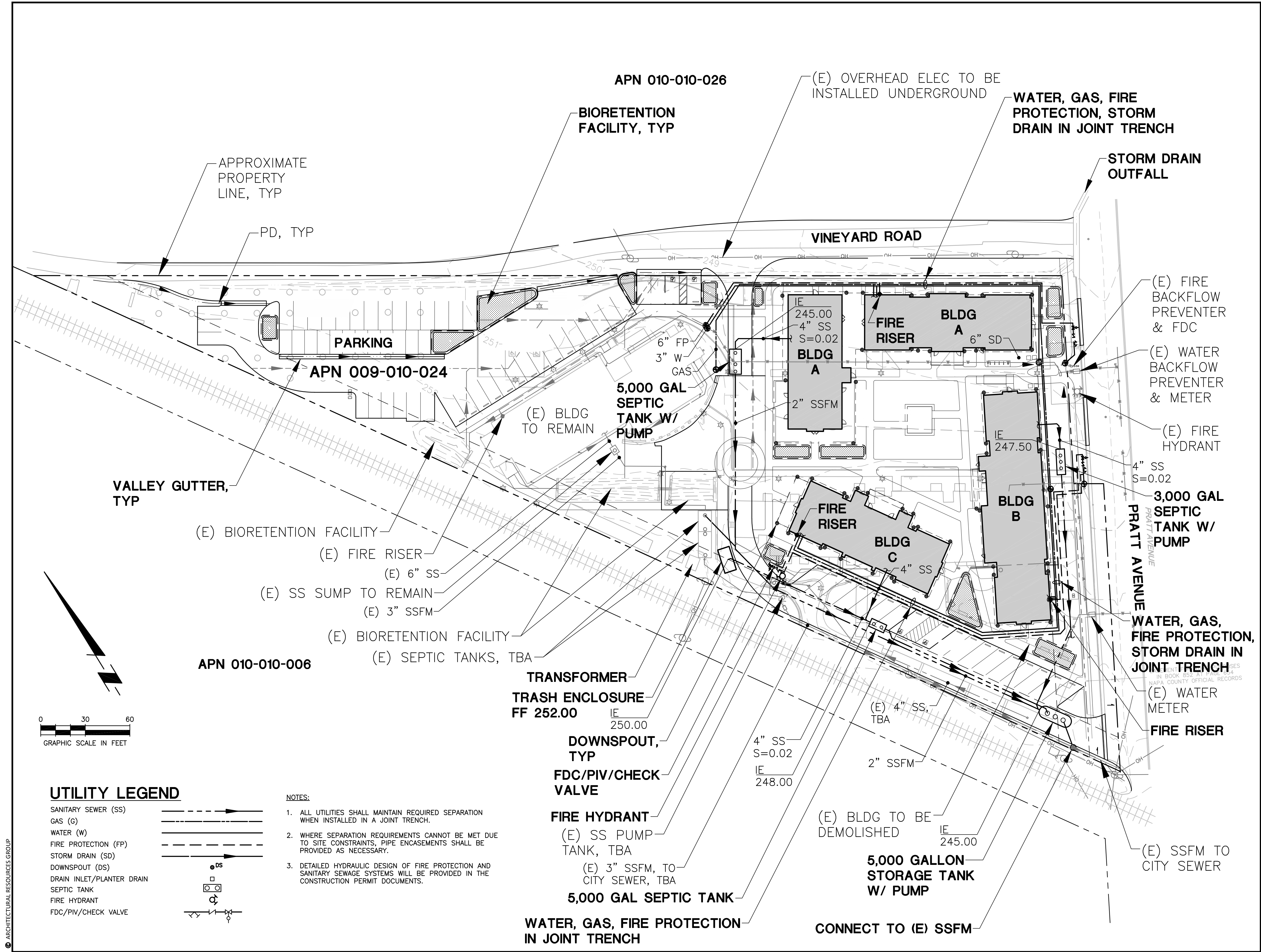












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**SHEET TITLE**

**PROPOSED UTILITY PLAN**

PERMIT AND DESIGN REVIEW SUBMITTAL

6-21-2016

PROJ NO. 11208.03

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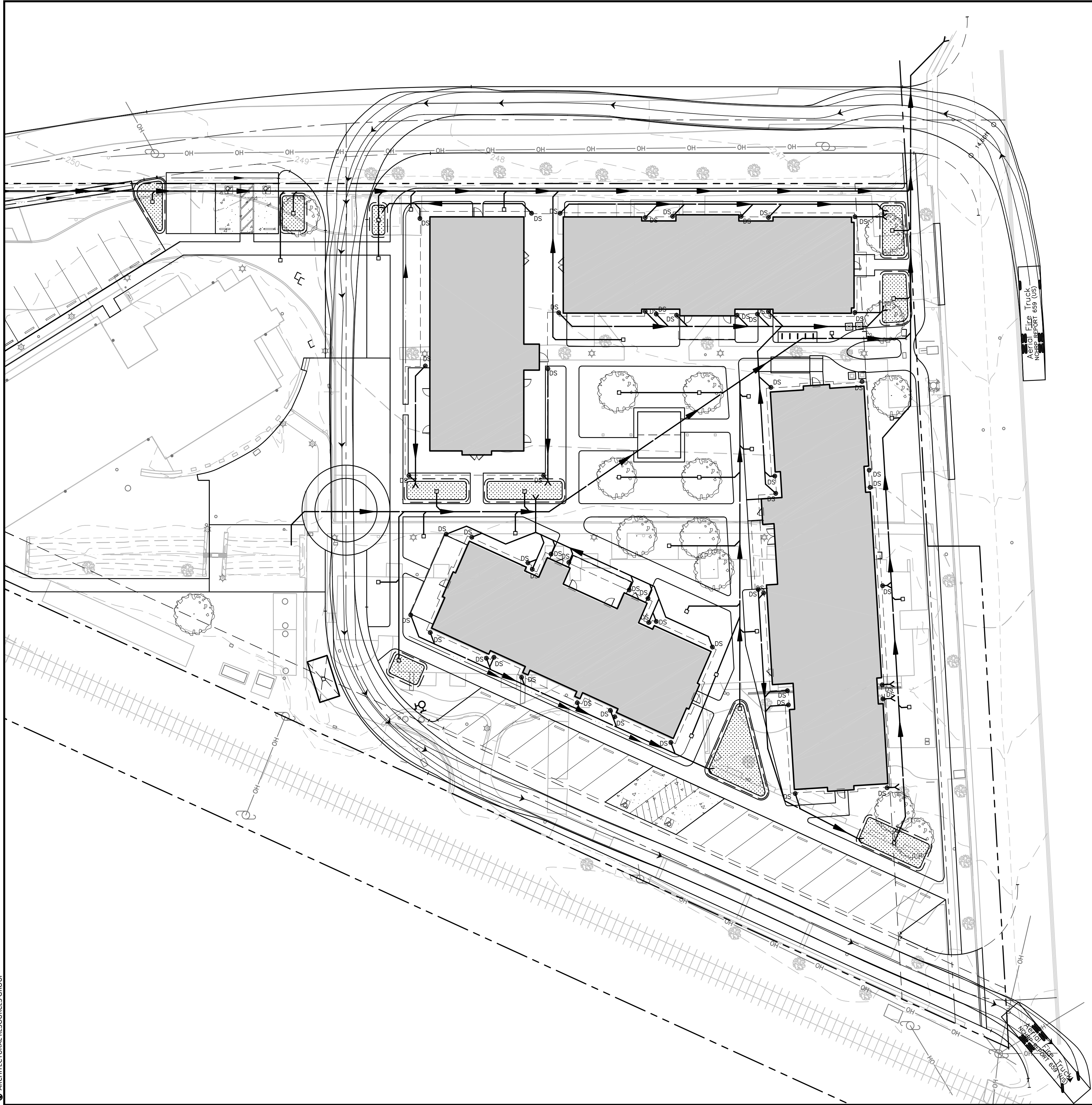
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**UP5**

24"x36" OR 22"x34" SHEET SIZE. IF SHEET IS SMALLER, THEN DRAWING HAS BEEN REDUCED.





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## THE CULINARY INSTITUTE OF AMERICA

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SHEET TITLE  
**FIRE TRUCK ACCESS**

PERMIT AND DESIGN REVIEW  
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6-21-2016

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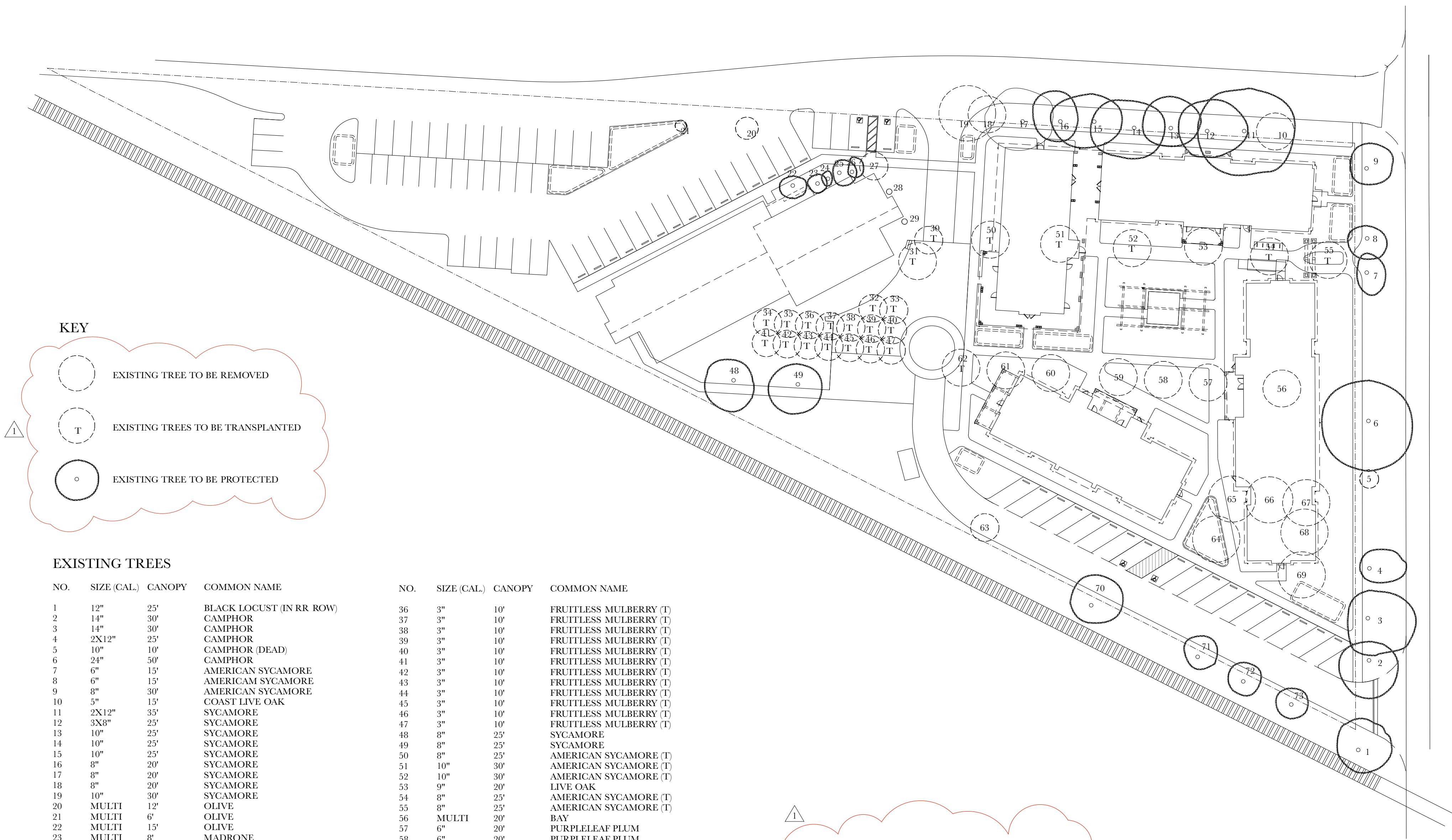
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UP6





EXISTING TREES

| NO. | SIZE (CAL.) | CANOPY | COMMON NAME              | NO. | SIZE (CAL.) | CANOPY | COMMON NAME            |
|-----|-------------|--------|--------------------------|-----|-------------|--------|------------------------|
| 1   | 12"         | 25'    | BLACK LOCUST (IN RR ROW) | 36  | 3"          | 10'    | FRUITLESS MULBERRY (T) |
| 2   | 14"         | 30'    | CAMPBOR                  | 37  | 3"          | 10'    | FRUITLESS MULBERRY (T) |
| 3   | 14"         | 30'    | CAMPBOR                  | 38  | 3"          | 10'    | FRUITLESS MULBERRY (T) |
| 4   | 2X12"       | 25'    | CAMPBOR                  | 39  | 3"          | 10'    | FRUITLESS MULBERRY (T) |
| 5   | 10"         | 10'    | CAMPBOR (DEAD)           | 40  | 3"          | 10'    | FRUITLESS MULBERRY (T) |
| 6   | 24"         | 50'    | CAMPBOR                  | 41  | 3"          | 10'    | FRUITLESS MULBERRY (T) |
| 7   | 6"          | 15'    | AMERICAN SYCAMORE        | 42  | 3"          | 10'    | FRUITLESS MULBERRY (T) |
| 8   | 6"          | 15'    | AMERICAM SYCAMORE        | 43  | 3"          | 10'    | FRUITLESS MULBERRY (T) |
| 9   | 8"          | 30'    | AMERICAN SYCAMORE        | 44  | 3"          | 10'    | FRUITLESS MULBERRY (T) |
| 10  | 5"          | 15'    | COAST LIVE OAK           | 45  | 3"          | 10'    | FRUITLESS MULBERRY (T) |
| 11  | 2X12"       | 35'    | SYCAMORE                 | 46  | 3"          | 10'    | FRUITLESS MULBERRY (T) |
| 12  | 3X3"        | 25'    | SYCAMORE                 | 47  | 3"          | 10'    | FRUITLESS MULBERRY (T) |
| 13  | 10"         | 25'    | SYCAMORE                 | 48  | 8"          | 25'    | SYCAMORE               |
| 14  | 10"         | 25'    | SYCAMORE                 | 49  | 8"          | 25'    | SYCAMORE               |
| 15  | 10"         | 25'    | SYCAMORE                 | 50  | 8"          | 25'    | AMERICAN SYCAMORE (T)  |
| 16  | 8"          | 20'    | SYCAMORE                 | 51  | 10"         | 30'    | AMERICAN SYCAMORE (T)  |
| 17  | 8"          | 20'    | SYCAMORE                 | 52  | 10"         | 30'    | AMERICAN SYCAMORE (T)  |
| 18  | 8"          | 20'    | SYCAMORE                 | 53  | 9"          | 20'    | LIVE OAK               |
| 19  | 10"         | 30'    | SYCAMORE                 | 54  | 8"          | 25'    | AMERICAN SYCAMORE (T)  |
| 20  | MULTI       | 12'    | OLIVE                    | 55  | 8"          | 25'    | AMERICAN SYCAMORE (T)  |
| 21  | MULTI       | 6'     | OLIVE                    | 56  | MULTI       | 20'    | BAY                    |
| 22  | MULTI       | 15'    | OLIVE                    | 57  | 6"          | 20'    | PURPLELEAF PLUM        |
| 23  | MULTI       | 8'     | MADRONE                  | 58  | 6"          | 20'    | PURPLELEAF PLUM        |
| 24  | MULTI       | 8'     | MADRONE                  | 59  | 6"          | 20'    | PURPLELEAF PLUM        |
| 25  | MULTI       | 8'     | MADRONE                  | 60  | 6"          | 20'    | PURPLELEAF PLUM        |
| 26  | MULTI       | 8'     | MADRONE                  | 61  | 6"          | 20'    | PURPLELEAF PLUM        |
| 27  | MULTI       | 15'    | MADRONE                  | 62  | 4"          | 10'    | FRUIT (T)              |
| 28  | 6"          | 20'    | ITALIAN CYPRESS          | 63  | MULTI       | 15'    | BAY                    |
| 29  | 6"          | 20'    | ITALIAN CYPRESS          | 64  | 12"         | 25'    | HONEY LOCUST           |
| 30  | MULTI       | 15'    | OLIVE (T)                | 65  | 12"         | 25'    | HONEY LOCUST           |
| 31  | MULTI       | 20'    | OLIVE (T)                | 66  | 12"         | 25'    | HONEY LOCUST           |
| 32  | 3"          | 10'    | FRUITLESS MULBERRY (T)   | 67  | 12"         | 25'    | HONEY LOCUST           |
| 33  | 3"          | 10'    | FRUITLESS MULBERRY (T)   | 68  | 12"         | 25'    | HONEY LOCUST           |
| 34  | 3"          | 10'    | FRUITLESS MULBERRY (T)   | 69  | 12"         | 25'    | HONEY LOCUST           |
| 35  | 3"          | 10'    | FRUITLESS MULBERRY (T)   | 70  | 14"         | 30'    | EUCALYPTUS (IN RR ROW) |

(T) DENOTES TREES TO BE TRANSPLANTED



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AT PRATT AVENUE

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SHEET TITLE  
TREE PROTECTION/  
REMOVAL PLAN

PERMIT AND DESIGN REVIEW  
SUBMITTAL

6-21-2016

PROJ NO.  
11208.03

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KEY

- EXISTING TREE (RETAINED)  
SEE EXISTING VEGETATION PLAN
- PROPOSED TREE
- PROPOSED SHRUBS
- WOOD MULCH IN ALL  
PLANTED AREAS

PLANT LIST

| KEY | BOTANICAL NAME                  | COMMON NAME             | QTY | SIZE AND REMARKS      |
|-----|---------------------------------|-------------------------|-----|-----------------------|
| A   | ACER PALMATUM 'SANGO-KAKU'      | CORAL BARK MAPLE        | 8   | 24" BOX               |
| B   | BERBERIS THUNBERGI              | BARBERRY                | 31  | 5 GAL                 |
| C   | CALLISTEMON SP.                 | BOTTLEBRUSH TREE        | 1   | 15 GAL                |
| D   | CISTUS SALVIFOLIUS 'PROSTRATUS' | DWARF WHITE ROCKROSE    | 90  | 1 GAL                 |
| E   | EPILOBIUM 'ETTERI'              | CALIFORNIA FUCHSIA      | 40  | 1 GAL                 |
| F   | FEIJOA SELLOWIANA               | PINEAPPLE GUAVA         | 16  | 15 GAL                |
| H   | FRAGARIA CHILOENSIS             | BEACH STRAWBERRY        | 95  | 4" POTS, IN BIOSWALES |
| J   | HYDRANGEA QUERCIFOLIA           | OAK LEAF HYDRANGEA      | 15  | 5 GAL                 |
| K   | LAURUS NOBILIS                  | SWEET BAY               | 4   | 15 GAL                |
| L   | MORUS ALBA                      | FRUITLESS MULBERRY TREE | 6   | TRANSPLANTED ON SITE  |
| M   | NASSELLA TENUISSIMA             | MEXICAN FEATHER GRASS   | 80  | 1 GAL                 |
| N   | OLEA 'LITTLE OLLIE'             | OLIVE SHRUB             | 9   | 5 GAL                 |
| P   | OLEA 'SWAN HILL'                | FRUITLESS OLIVE TREE    | 5   | 24" BOX               |
| Q   | PISTACEA SINENSIS               | CHINESE PISTACHE        | 15  | 24" BOX               |
| R   | PUNICUM GRANATA 'NANA'          | DWARF POMEGRANATE       | 3   | 5 GAL                 |
| S   | PUNICUM SP.                     | POMEGRANATE             | 4   | 15 GAL                |
| T   | RHAMNUS CALIFORNICA 'EVE CASE'  | COFFEEBERRY             | 12  | 5 GAL, IN BIOSWALES   |
| U   | ROSA 'ICEBERG'                  | ICEBERG ROSE            | 23  | 5 GAL                 |
| V   | ROSMARINUS 'TUSCAN BLUE'        | TUSCAN BLUE ROSEMARY    | 10  | 5 GAL                 |
| W   | SYMPHORICARPUS ALBUS            | SNOWBERRY               | 14  | 5 GAL, IN BIOSWALES   |
| X   | TEUCRIUM CHAMAEDRYS             | GERMANDER               | 60  | 1 GAL                 |

PLANTING NOTES:

1. ALL PLANTS AND LAWN TO BE IRRIGATED WITH AN AUTOMATED IRRIGATION SYSTEM.
2. ALL PROPOSED PLANT MATERIALS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION AND WILL BE REJECTED IF NOT IN CONFORMANCE WITH INDUSTRY STANDARDS. PLANTS SHALL BE PRUNED PRIOR TO INSPECTION.
3. PLANTING AREAS SHALL BE CLEARED OF ALL WEEDS AND DEBRIS PRIOR TO SOIL PREPARATION. IN THE CASE OF PERNICIOUS PERENNIAL WEEDS, A SYSTEMATIC HERBICIDE SHALL BE APPLIED PRIOR TO CLEARING. IF PARTICULARLY DIFFICULT WEEDS SUCH AS WILD ONION ARE ENCOUNTERED, THE LANDSCAPE ARCHITECT AND OWNERS SHALL BE ADVISED PRIOR TO PROCEEDING.
4. ALL PLANTING OPERATIONS SHALL BE PERFORMED BY PERSONNEL FAMILIAR WITH THIS TYPE OF WORK AND UNDER THE SUPERVISION OF A QUALIFIED PLANTING FOREMAN.
5. THE LANDSCAPE CONTRACTOR SHALL SUPPLY AND CULTIVATE 2 INCHES OF NITROLIZED FIR BARK AND 1 INCH OF 3/16" MINUS LAVA STONE INTO THE TOP 6 INCHES OF ALL PLANTING AREAS. ROTOTILL IN LIFTS AS REQUIRED, OR HAND WORK NEAR ROOT SYSTEMS OF EXISTING TREES.
6. ALL PLANT MATERIAL SHALL BE DELIVERED TO THE JOBSITE FOR INSPECTION. PRIOR TO PLANTING, THE CONTRACTOR SHALL CONFIRM LOCATIONS OF ALL PLANTS WITH THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL GIVE 3 DAYS NOTICE OF PLANT DELIVERY AND PLACEMENT.
7. ON COMPLETION OF PLANTING AND IRRIGATION INSTALLATION, ALL PLANTED AREAS SHALL RECEIVE A UNIFORM LAYER OF 2 INCHES OF FIR BARK WOOD MULCH. CONTRACTOR SHALL PROVIDE A SAMPLE OF MULCH PRIOR TO ORDERING.
8. THE LANDSCAPE CONTRACTOR SHALL MAKE NO CHANGES TO THE PLANT LAYOUT WITHOUT CONSENT OF THE LANDSCAPE ARCHITECT.
9. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL NEW PLANTINGS FOR A 6 MONTH PERIOD OR UNTIL THERE IS EVIDENCE OF POSITIVE GROWTH. THE GUARANTEE PERIOD SHALL BEGIN AFTER FINAL INSPECTION AND APPROVAL.
10. ANY PLANTS THAT DIE OR ARE DAMAGED SHALL BE REPLACED IMMEDIATELY.

1

HYDROZONES

| NUMBER | DESRPTION            | WATER USE |
|--------|----------------------|-----------|
| H1     | LOW DENSITY PLANTING | LOW/DRIP  |
| H2     | LOW DENSITY PLANTING | LOW/DRIP  |
| H3     | LOW DENSITY PLANTING | LOW/DRIP  |
| H4     | LOW DENSITY PLANTING | LOW/DRIP  |
| H5     | LOW DENSITY PLANTING | LOW/DRIP  |
| H6     | LOW DENSITY PLANTING | LOW/DRIP  |
| H7     | LOW DENSITY PLANTING | LOW/DRIP  |
| H8     | LOW DENSITY PLANTING | LOW/DRIP  |
| H9     | SOD LAWN             | HIGH/OS   |
| H10    | SOD LAWN             | HIGH/OS   |
| H11    | LOW DENSITY PLANTING | LOW/DRIP  |
| H12    | LOW DENSITY PLANTING | LOW/DRIP  |
| H13    | LOW DENSITY PLANTING | LOW/DRIP  |
| H14    | LOW DENSITY PLANTING | LOW/DRIP  |
| H15    | LOW DENSITY PLANTING | LOW/DRIP  |
| H16    | LOW DENSITY PLANTING | LOW/DRIP  |
| H17    | LOW DENSITY PLANTING | LOW/DRIP  |
| H18    | LOW DENSITY PLANTING | LOW/DRIP  |
| H19    | NEW TREES            | LOW/DRIP  |
| H20    | NEW TREES            | LOW/DRIP  |
| H21    | LOW DENSITY PLANTING | LOW/DRIP  |
| H22    | LOW DENSITY PLANTING | LOW/DRIP  |
| H23    | LOW DENSITY PLANTING | LOW/DRIP  |
| H24    | NEW TREES            | LOW/DRIP  |

HYDROZONE NUMBERS CORRESPOND WITH VALVE NUMBERS ON IRRIGATION PLAN.

REFER TO MWELO CALCULATIONS.



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NO. DESCRIPTION DATE

REVISIONS

THE CULINARY  
INSTITUTE OF  
AMERICA

AT PRATT AVENUE

830 PRATT AVENUE  
ST. HELENA, CALIFORNIA

SHEET TITLE

LANDSCAPE  
PLAN

PERMIT AND DESIGN REVIEW  
SUBMITTAL

6-21-2016

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11208.03

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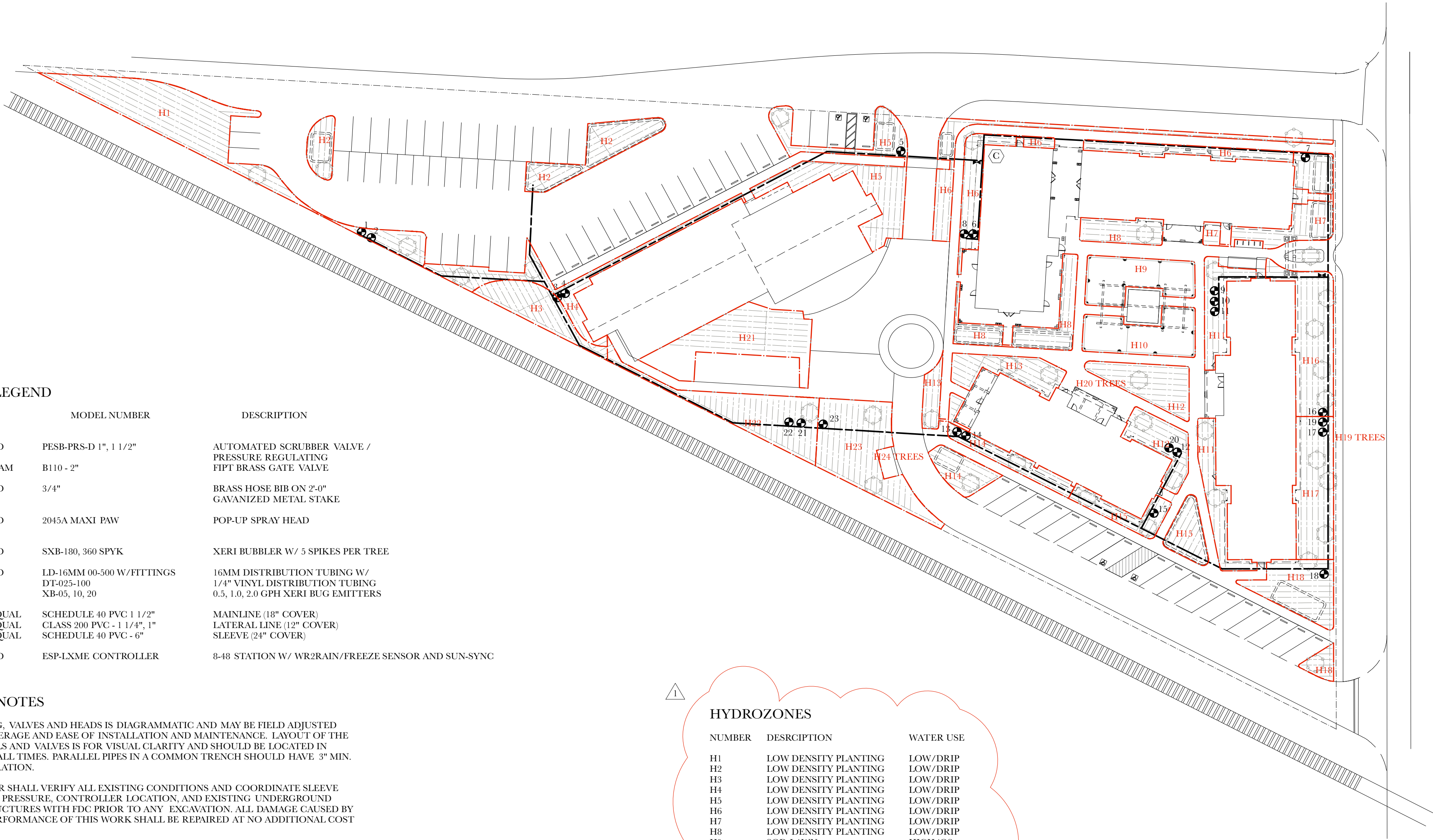
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IRRIGATION LEGEND

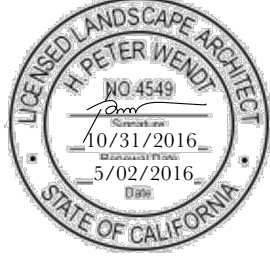
| KEY | MAKE     | MODEL NUMBER                                       | DESCRIPTION                                                                                    |
|-----|----------|----------------------------------------------------|------------------------------------------------------------------------------------------------|
|     | RAINBIRD | PESB-PRS-D 1", 1 1/2"                              | AUTOMATED SCRUBBER VALVE / PRESSURE REGULATING FIPT BRASS GATE VALVE                           |
|     | STOCKHAM | B110 - 2"                                          | BRASS HOSE BIB ON 2'-0" GAVANIZED METAL STAKE                                                  |
|     | RAINBIRD | 3/4"                                               | POP-UP SPRAY HEAD                                                                              |
|     | RAINBIRD | 2045A MAXI PAW                                     | XERI BUBBLER W/ 5 SPIKES PER TREE                                                              |
|     | RAINBIRD | SXB-180, 360 SPYK                                  | 16MM DISTRIBUTION TUBING W/ 1/4" VINYL DISTRIBUTION TUBING 0.5, 1.0, 2.0 GPH XERI BUG EMITTERS |
|     | RAINBIRD | LD-16MM 00-500 W/FITTINGS DT-025-100 XB-05, 10, 20 | MAINLINE (18" COVER) LATERAL LINE (12" COVER) SLEEVE (24" COVER)                               |
|     | RAINBIRD | ESP-LXME CONTROLLER                                | 8-48 STATION W/ WR2RAIN/FREEZE SENSOR AND SUN-SYNC                                             |

IRRIGATION NOTES

1. LAYOUT OF PIPING, VALVES AND HEADS IS DIAGRAMMATIC AND MAY BE FIELD ADJUSTED FOR OPTIMUM COVERAGE AND EASE OF INSTALLATION AND MAINTENANCE. LAYOUT OF THE MAIN LINE, LATERALS AND VALVES IS FOR VISUAL CLARITY AND SHOULD BE LOCATED IN PLANTING BEDS AT ALL TIMES. PARALLEL PIPES IN A COMMON TRENCH SHOULD HAVE 3" MIN. HORIZONTAL SEPARATION.
2. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND COORDINATE SLEEVE LOCATIONS, WATER PRESSURE, CONTROLLER LOCATION, AND EXISTING UNDERGROUND UTILITIES AND STRUCTURES WITH FDC PRIOR TO ANY EXCAVATION. ALL DAMAGE CAUSED BY OR DURING THE PERFORMANCE OF THIS WORK SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER.
3. PROVIDE 18" OF COVER OVER MAIN LINES AND 12" OF COVER OVER LATERALS. ALL TRENCHING WITHIN OR NEAR THE DRIPLINES OF EXISTING TREES SHALL BE APPROVED BY THE ARBORIST PRIOR TO PROCEEDING.
4. ALL BACKFILL MATERIAL SHALL BE CLEAN AND FREE OF ROCKS AND DEBRIS AND SHALL BE COMPACTED TO ORIGINAL SOIL DENSITY. SLEEVES SHALL EXTEND 12" BEYOND PAVING EDGES.
5. THE CONTRACTOR SHALL MAINTAIN AN ACCURATE AS-BUILD DRAWING OF THE INSTALLED SYSTEM AND PROVIDE IT TO THE OWNER UPON COMPLETION OF THE WORK.

STATEMENT OF COMPLIANCE:

I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE DESIGN PLAN.



| HYDROZONES |                      |           |
|------------|----------------------|-----------|
| NUMBER     | DESCRIPTION          | WATER USE |
| H1         | LOW DENSITY PLANTING | LOW/DRIP  |
| H2         | LOW DENSITY PLANTING | LOW/DRIP  |
| H3         | LOW DENSITY PLANTING | LOW/DRIP  |
| H4         | LOW DENSITY PLANTING | LOW/DRIP  |
| H5         | LOW DENSITY PLANTING | LOW/DRIP  |
| H6         | LOW DENSITY PLANTING | LOW/DRIP  |
| H7         | LOW DENSITY PLANTING | LOW/DRIP  |
| H8         | LOW DENSITY PLANTING | LOW/DRIP  |
| H9         | SOD LAWN             | HIGH/OS   |
| H10        | SOD LAWN             | HIGH/OS   |
| H11        | LOW DENSITY PLANTING | LOW/DRIP  |
| H12        | LOW DENSITY PLANTING | LOW/DRIP  |
| H13        | LOW DENSITY PLANTING | LOW/DRIP  |
| H14        | LOW DENSITY PLANTING | LOW/DRIP  |
| H15        | LOW DENSITY PLANTING | LOW/DRIP  |
| H16        | LOW DENSITY PLANTING | LOW/DRIP  |
| H17        | LOW DENSITY PLANTING | LOW/DRIP  |
| H18        | LOW DENSITY PLANTING | LOW/DRIP  |
| H19        | NEW TREES            | LOW/DRIP  |
| H20        | NEW TREES            | LOW/DRIP  |
| H21        | LOW DENSITY PLANTING | LOW/DRIP  |
| H22        | LOW DENSITY PLANTING | LOW/DRIP  |
| H23        | LOW DENSITY PLANTING | LOW/DRIP  |
| H24        | NEW TREES            | LOW/DRIP  |

HYDROZONE NUMBERS CORRESPOND WITH VALVE NUMBERS ON IRRIGATION PLAN.

REFER TO MWELO CALCULATIONS.



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RESPONSE TO CITY COMMENTS 9.06.2016

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SHEET TITLE

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SUBMITTAL

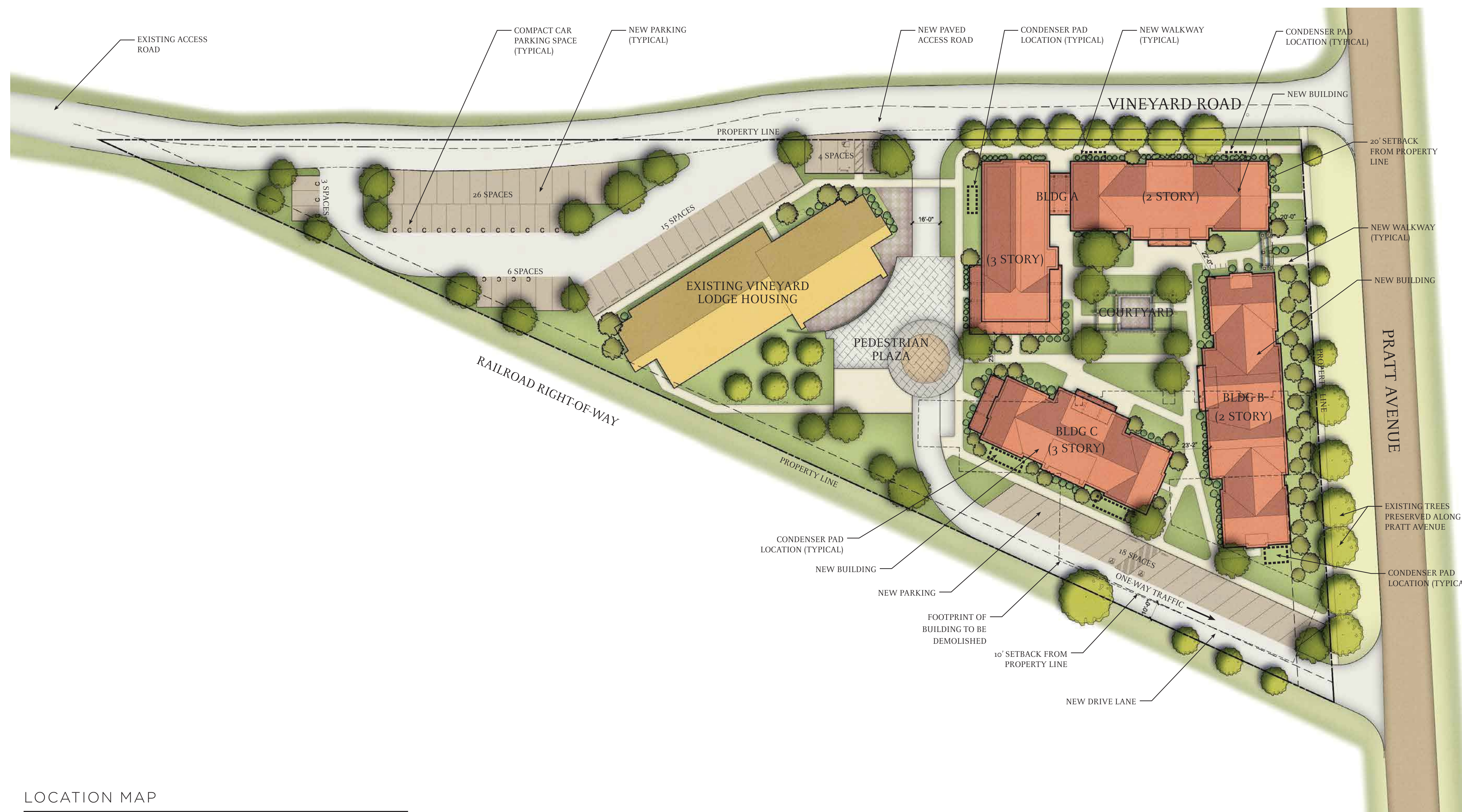
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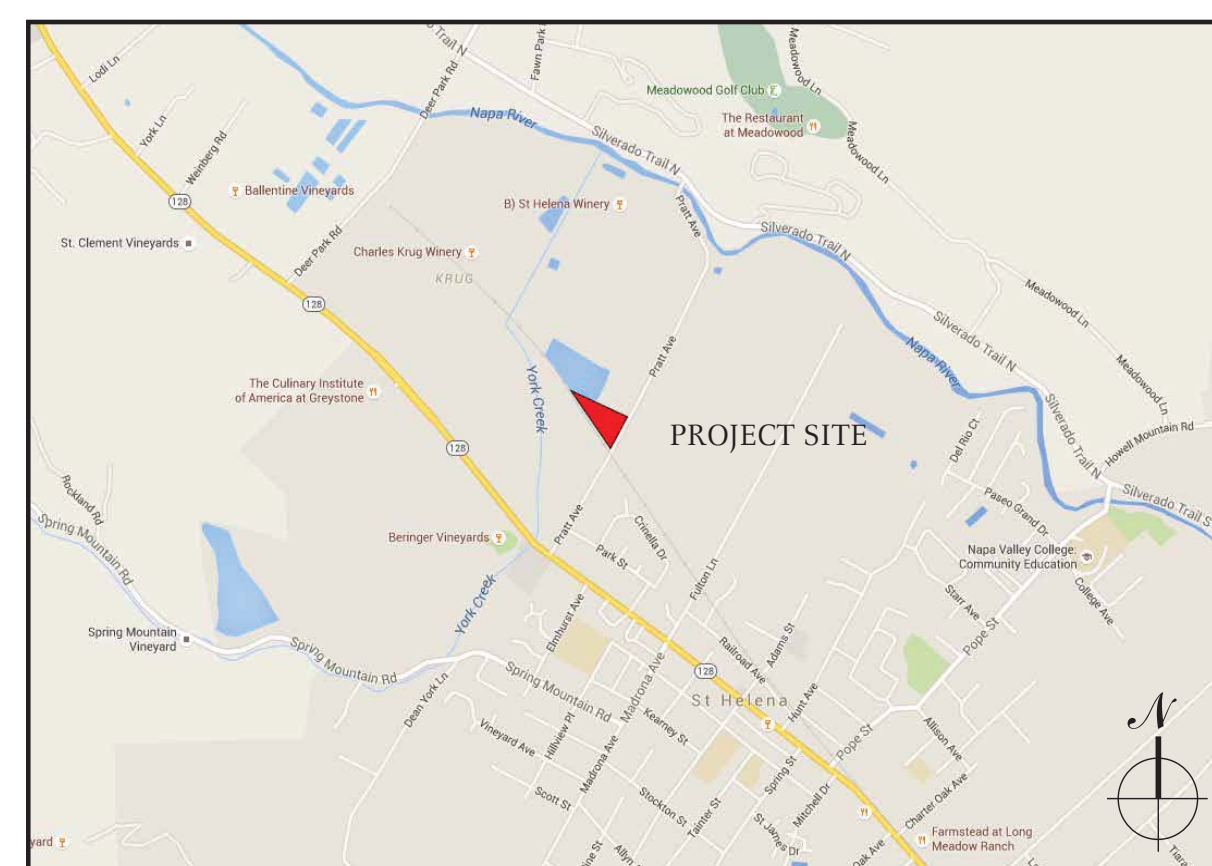
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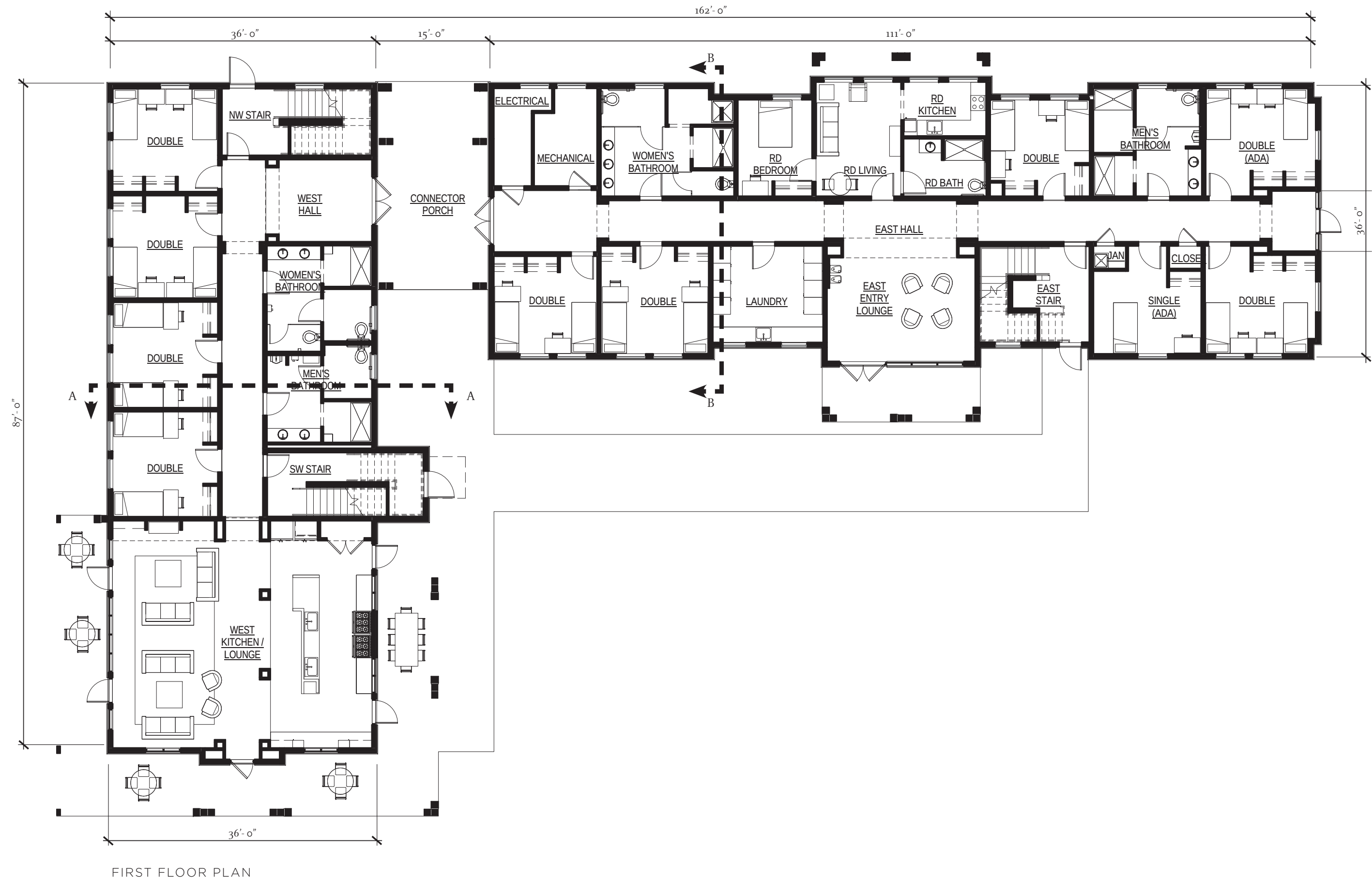
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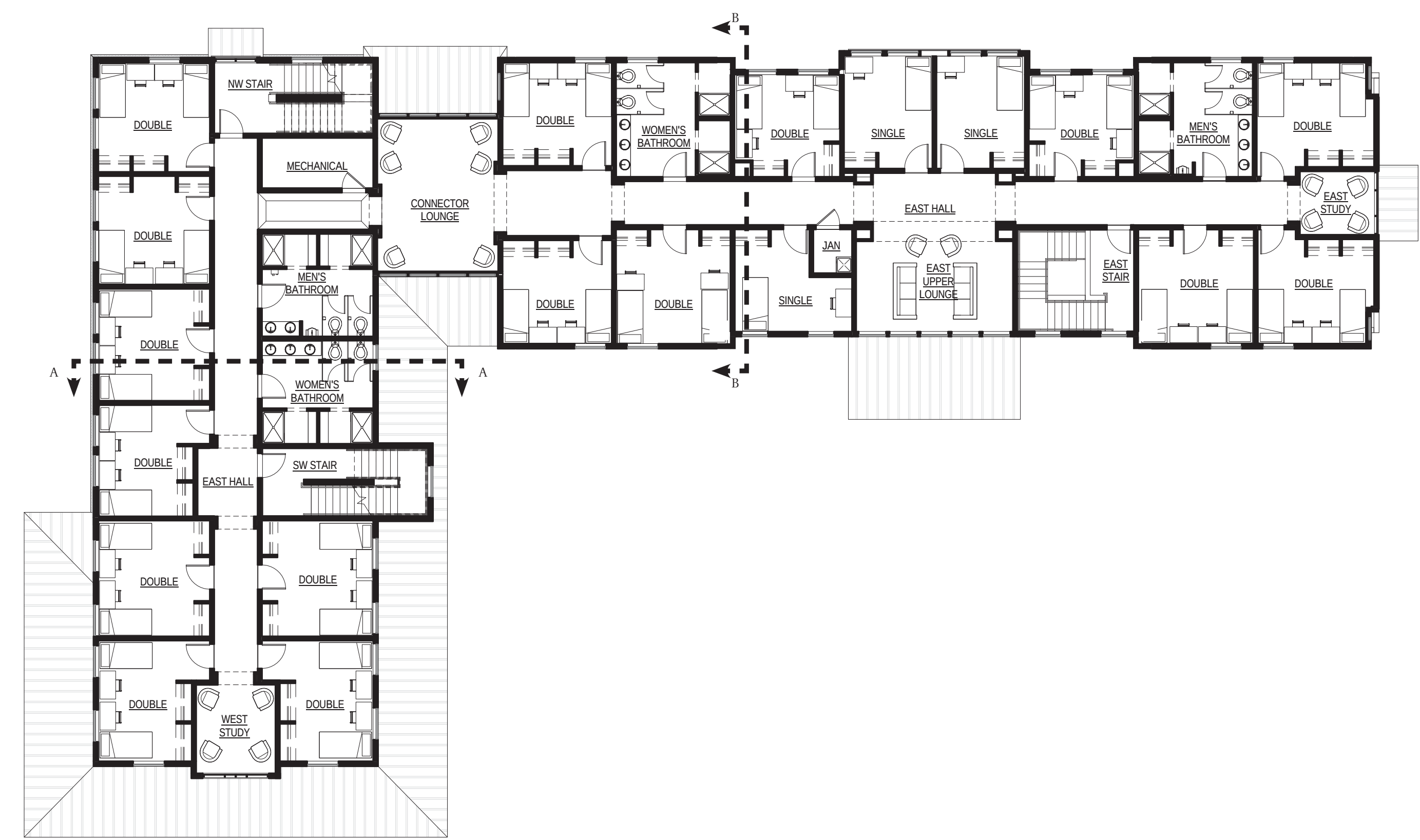
SCALE: 1"=30'-0"







FIRST FLOOR PLAN



SECOND FLOOR PLAN

| BED COUNT       |           |
|-----------------|-----------|
| First Floor:    | 21 Beds   |
| Single Room     | 3 Beds    |
| Double Room     | 18 Beds   |
| Second Floor:   | 37 Beds   |
| Single Room     | 5 Beds    |
| Double Room     | 32 Beds   |
| Third Floor:    | 12 Beds   |
| Single Room     | 0 Beds    |
| Double Room     | 12 Beds   |
| Total Beds:     | 70 Beds   |
| Total Gross SF: | 17,885 sf |



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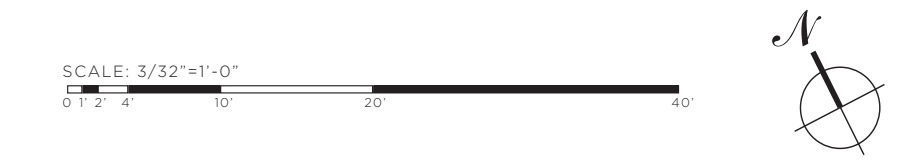
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### BUILDING A FLOOR PLANS

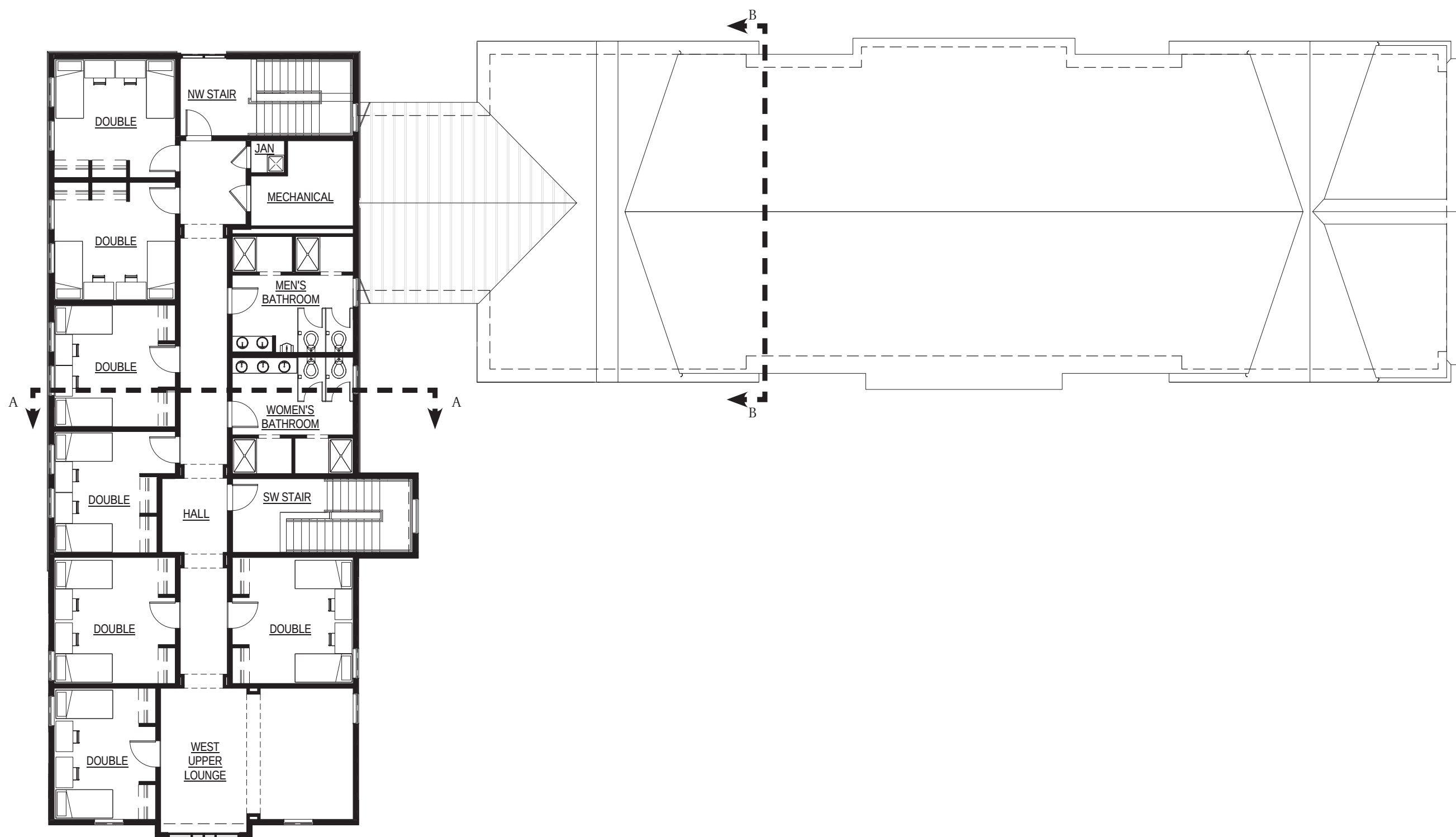
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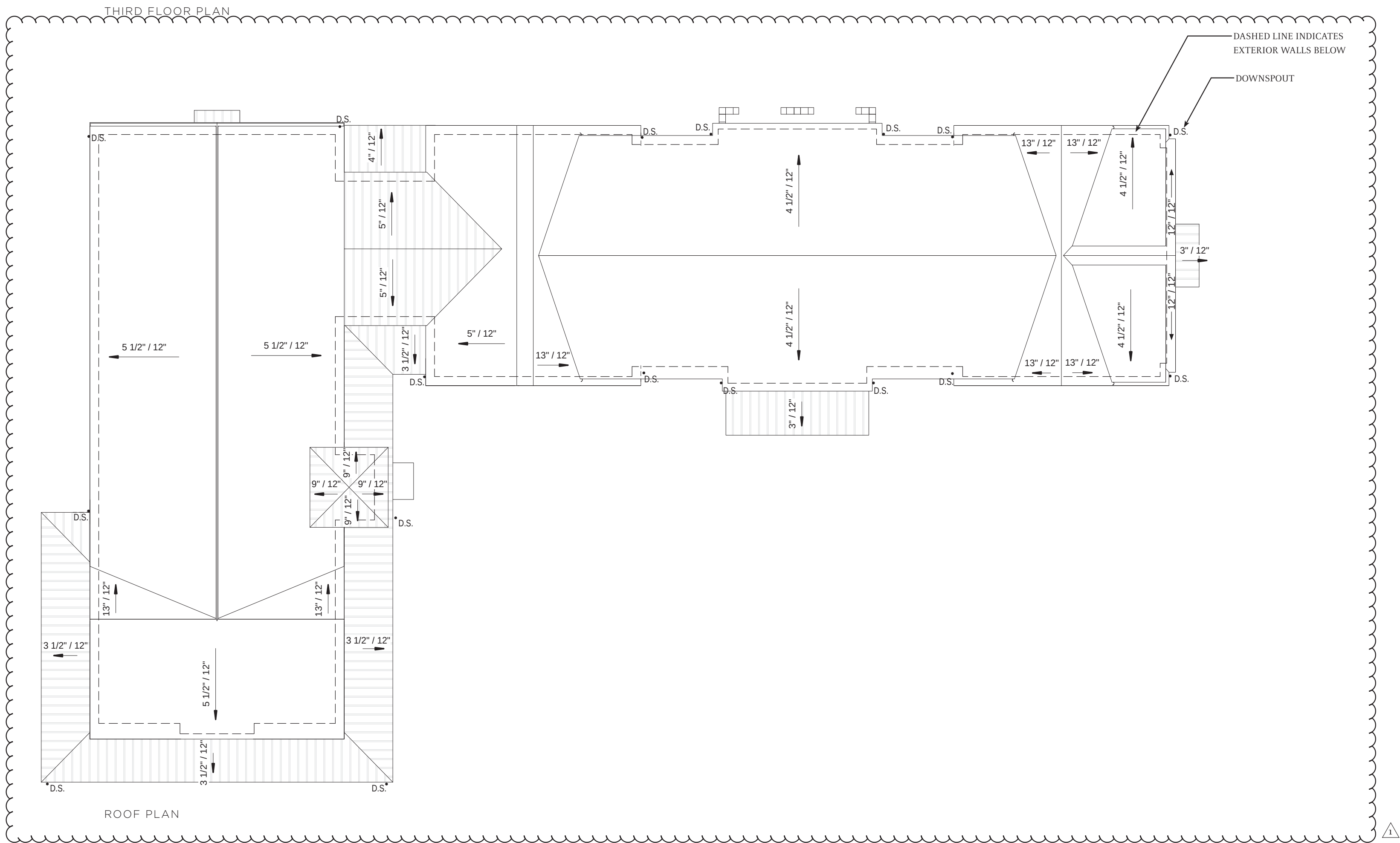
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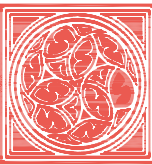




| BED COUNT       |           |
|-----------------|-----------|
| First Floor:    | 21 Beds   |
| Single Room     | 3 Beds    |
| Double Room     | 18 Beds   |
| Second Floor:   | 37 Beds   |
| Single Room     | 5 Beds    |
| Double Room     | 32 Beds   |
| Third Floor:    | 12 Beds   |
| Single Room     | 0 Beds    |
| Double Room     | 12 Beds   |
| Total Beds:     | 70 Beds   |
| Total Gross SF: | 17,885 sf |



SCALE: 3/32"=1'-0"



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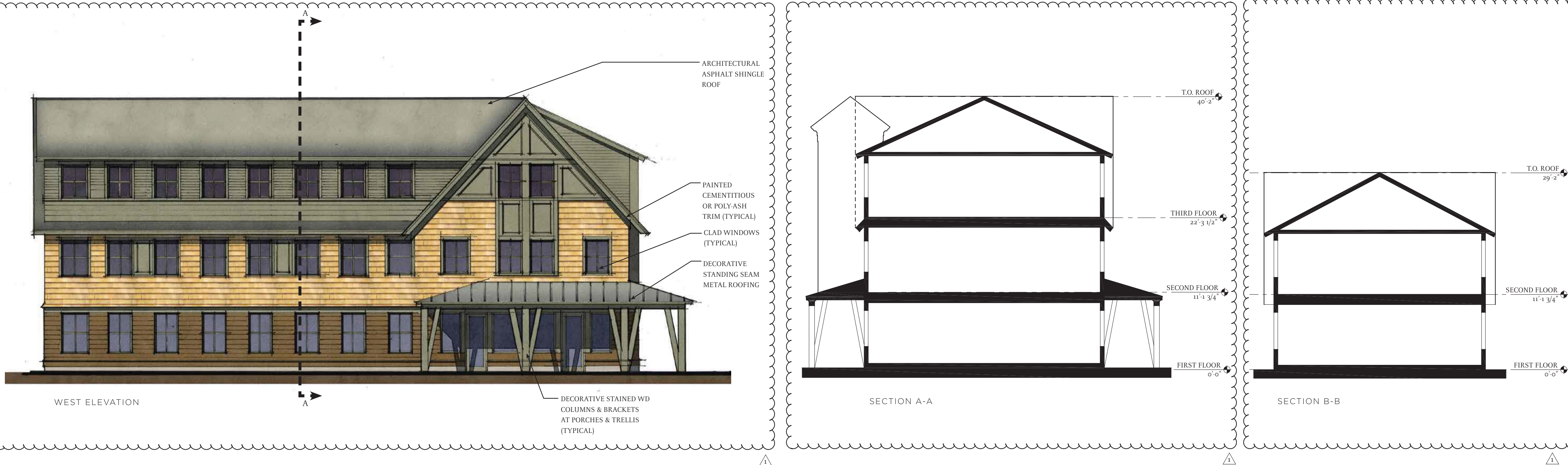
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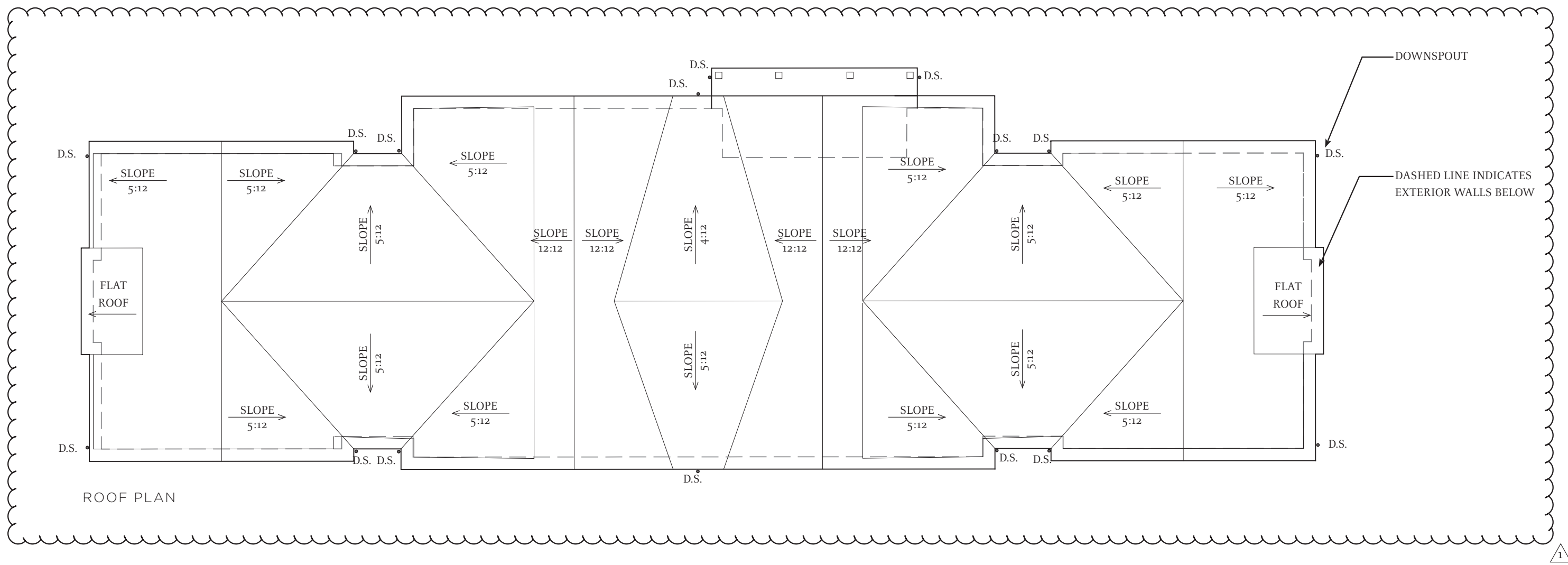
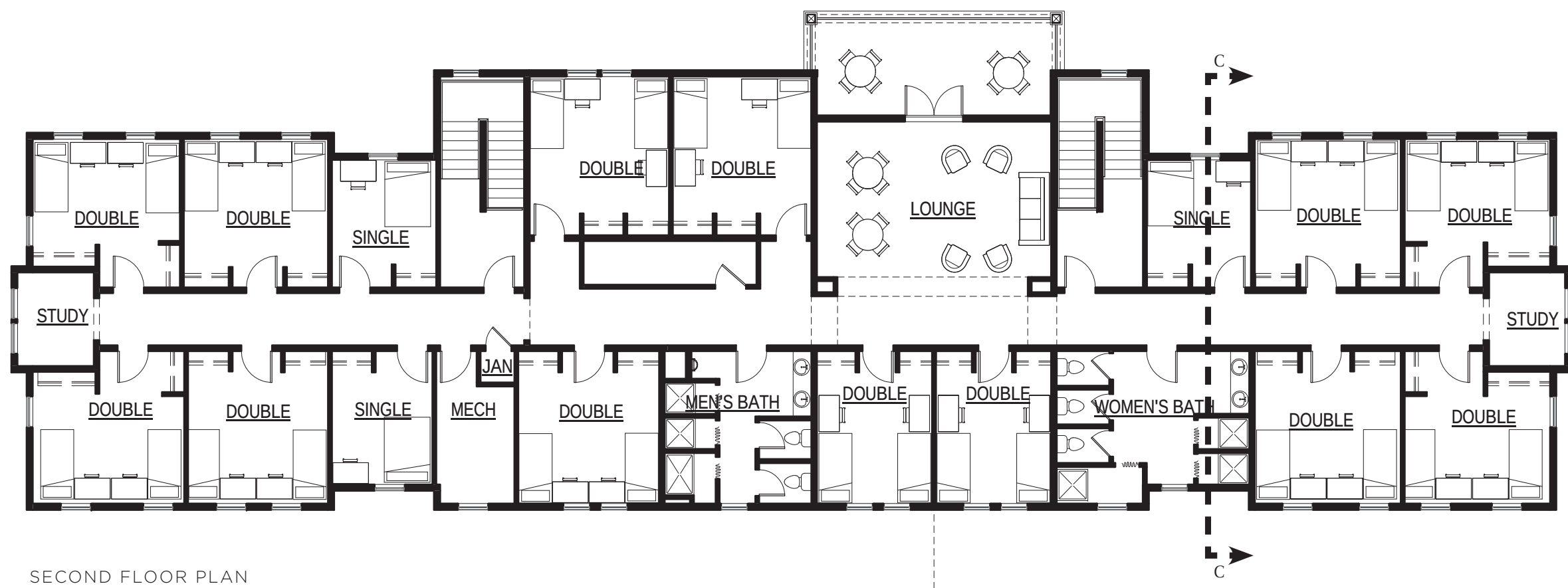
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| BED COUNT       |           |
|-----------------|-----------|
| First Floor:    | 23 Beds   |
| Single Room     | 1 Beds    |
| Double Room     | 22 Beds   |
| Second Floor:   | 29 Beds   |
| Single Room     | 3 Beds    |
| Double Room     | 26 Beds   |
| Total Beds:     | 52 Beds   |
| Total Gross SF: | 11,380 sf |



SCALE: 3/32"=1'-0"



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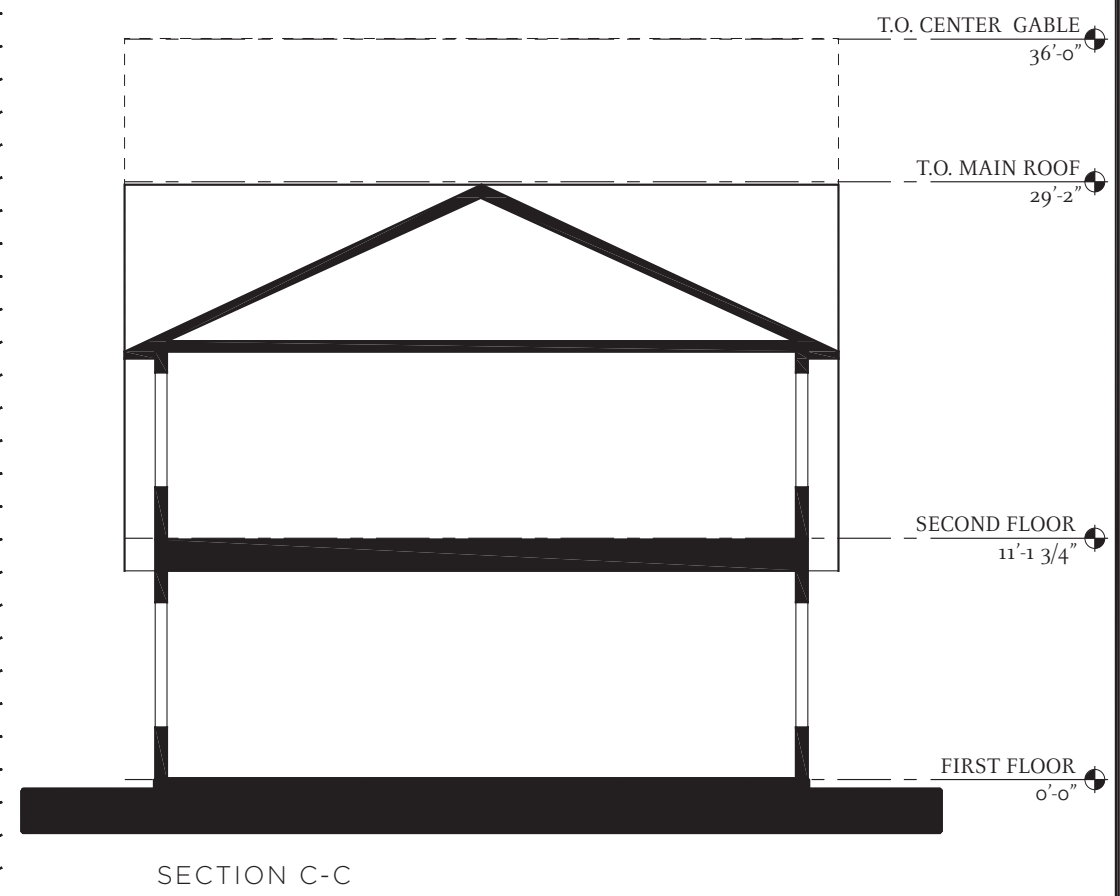
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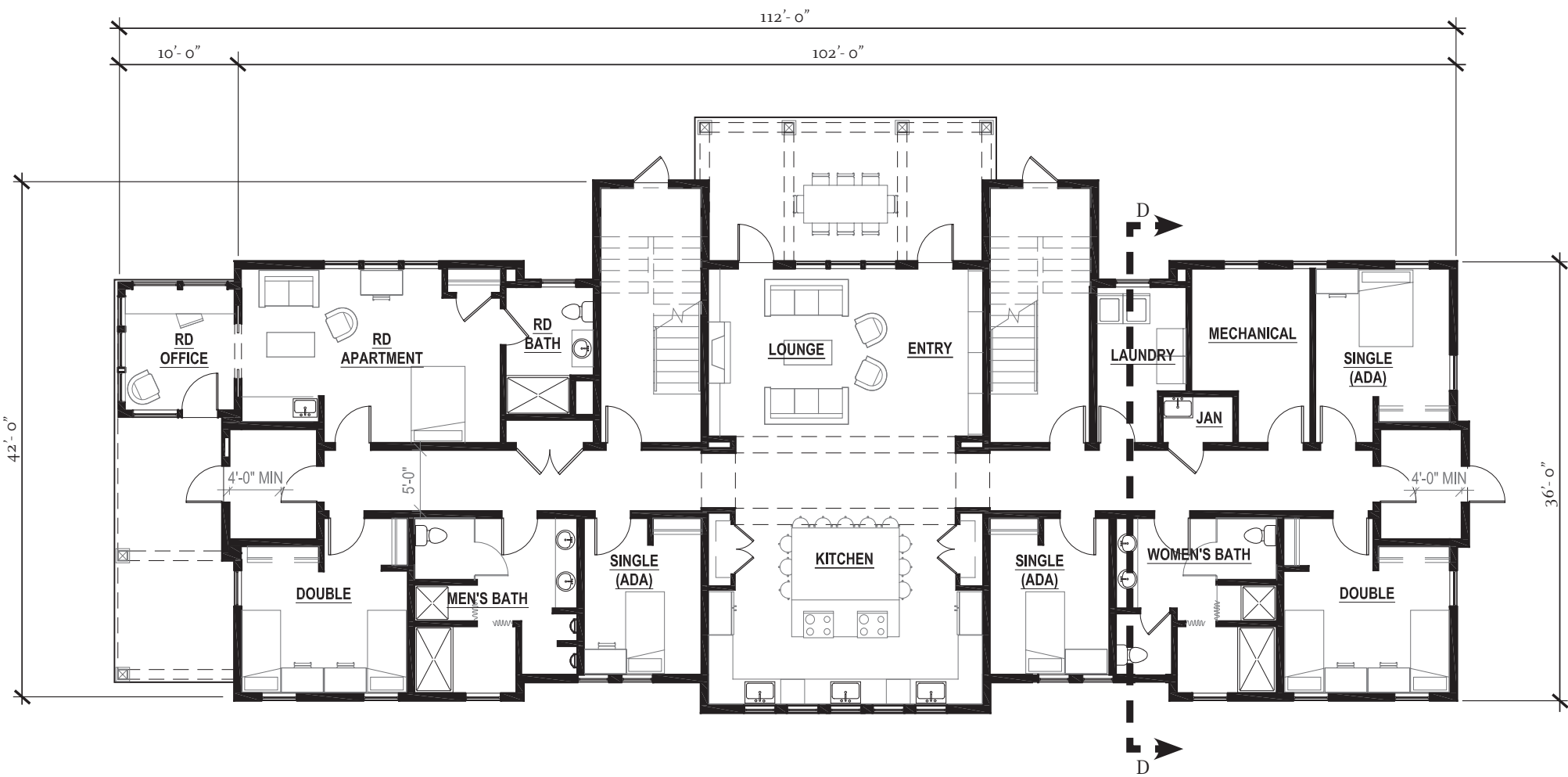
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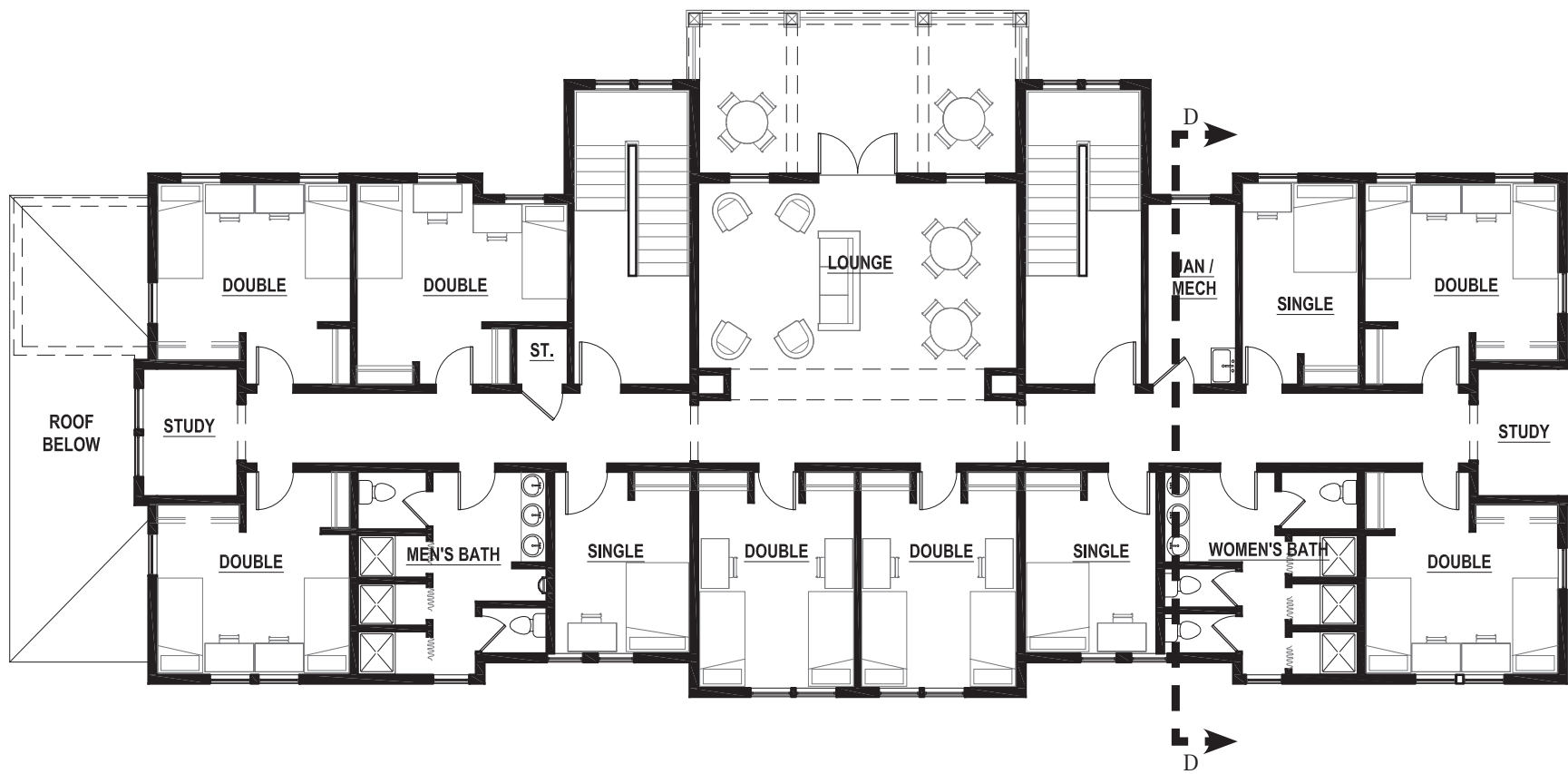
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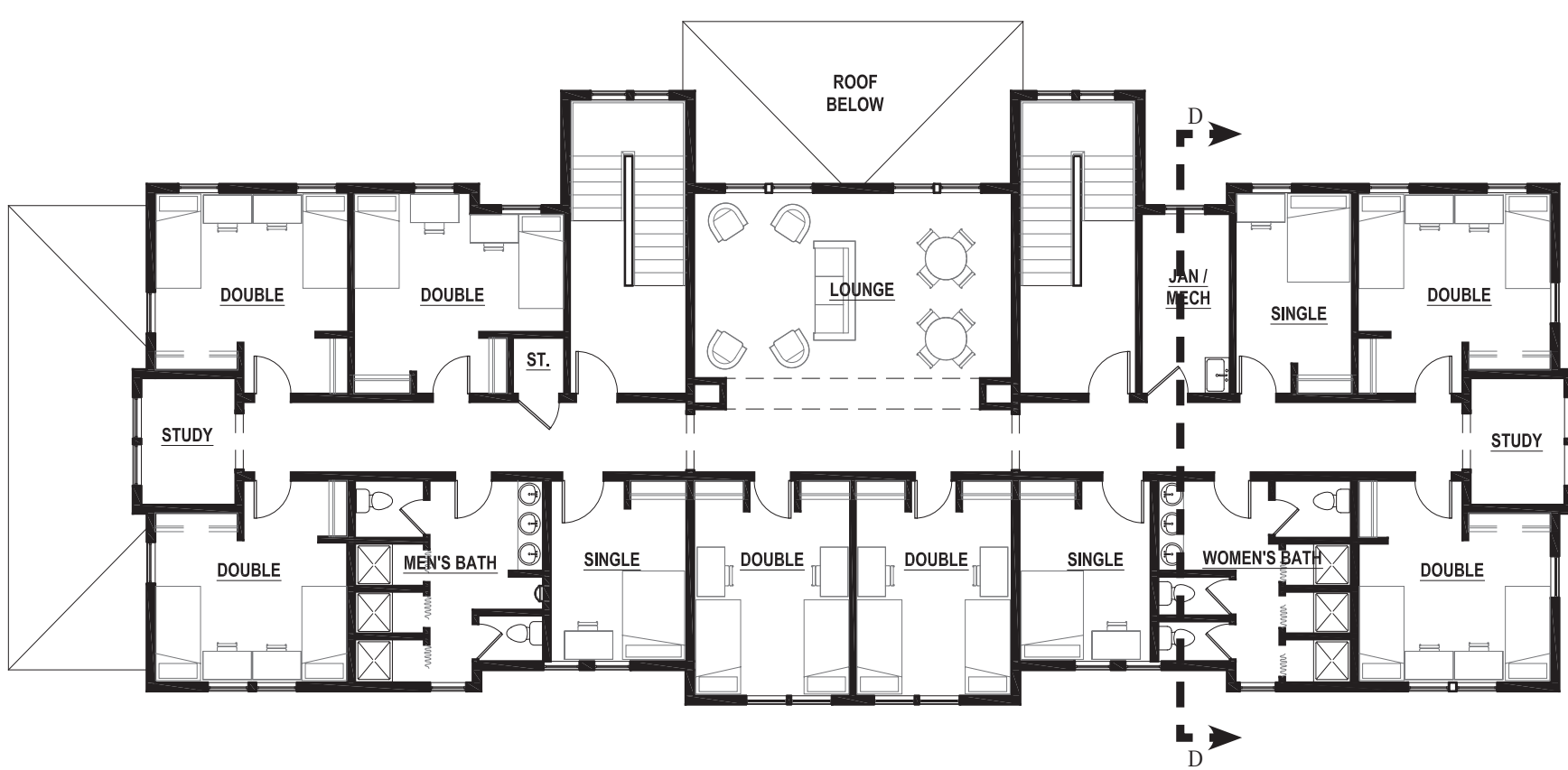




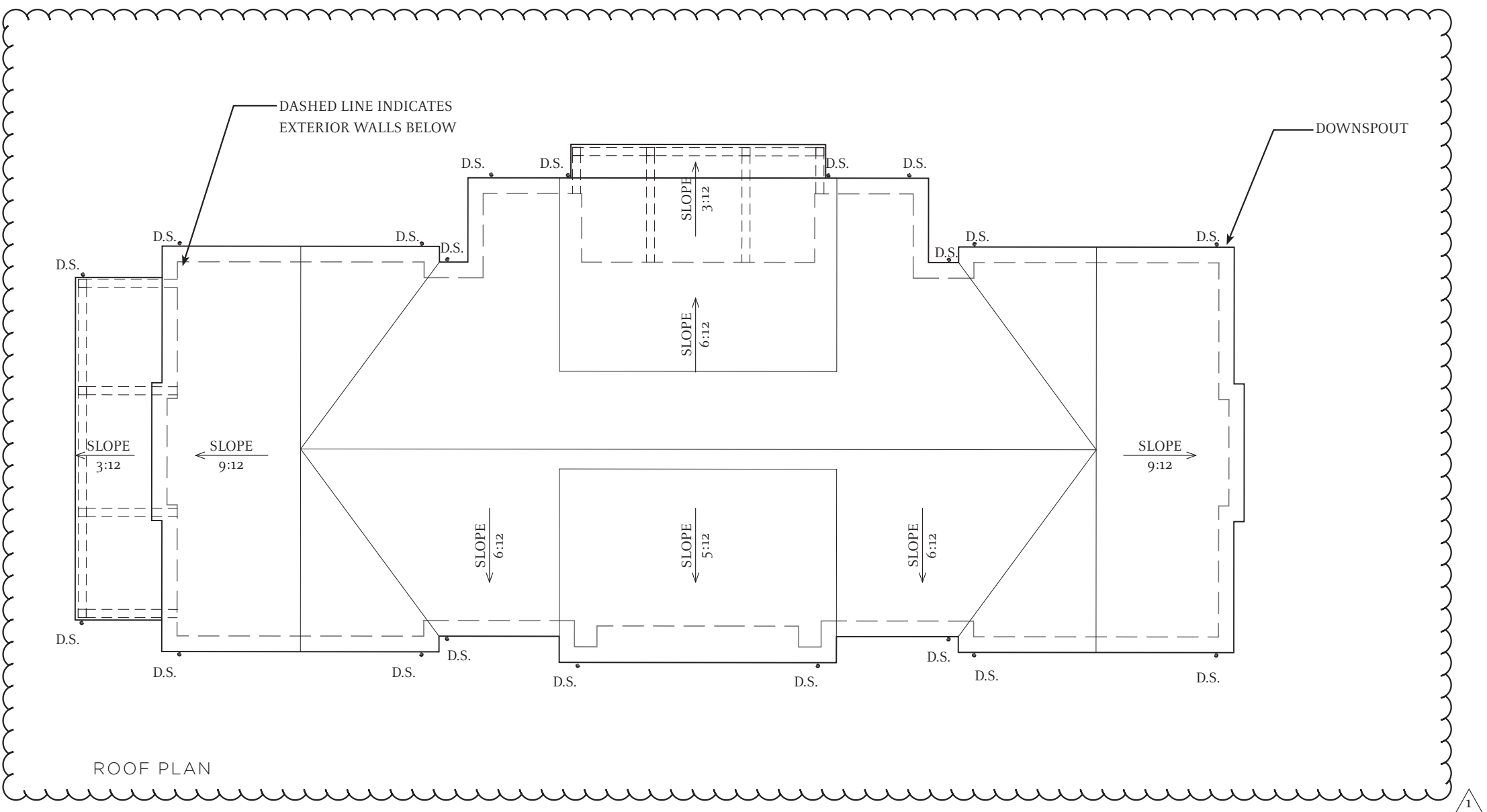
FIRST FLOOR PLAN



SECOND FLOOR PLAN

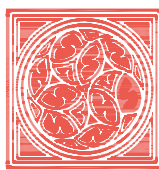


THIRD FLOOR PLAN



ROOF PLAN

| BED COUNT              |           |
|------------------------|-----------|
| First Floor:           | 8 Beds    |
| Single Room            | 4 Beds*   |
| Double Room            | 4 Beds    |
| Second Floor:          | 17 Beds   |
| Single Room            | 3 beds    |
| Double Room            | 14 Beds   |
| Third Floor:           | 17 Beds   |
| Single Room            | 3 Beds    |
| Double Room            | 14 Beds   |
| *Includes RD Apartment |           |
| Total Beds:            | 42 Beds   |
| Total Gross SF:        | 11,380 sf |



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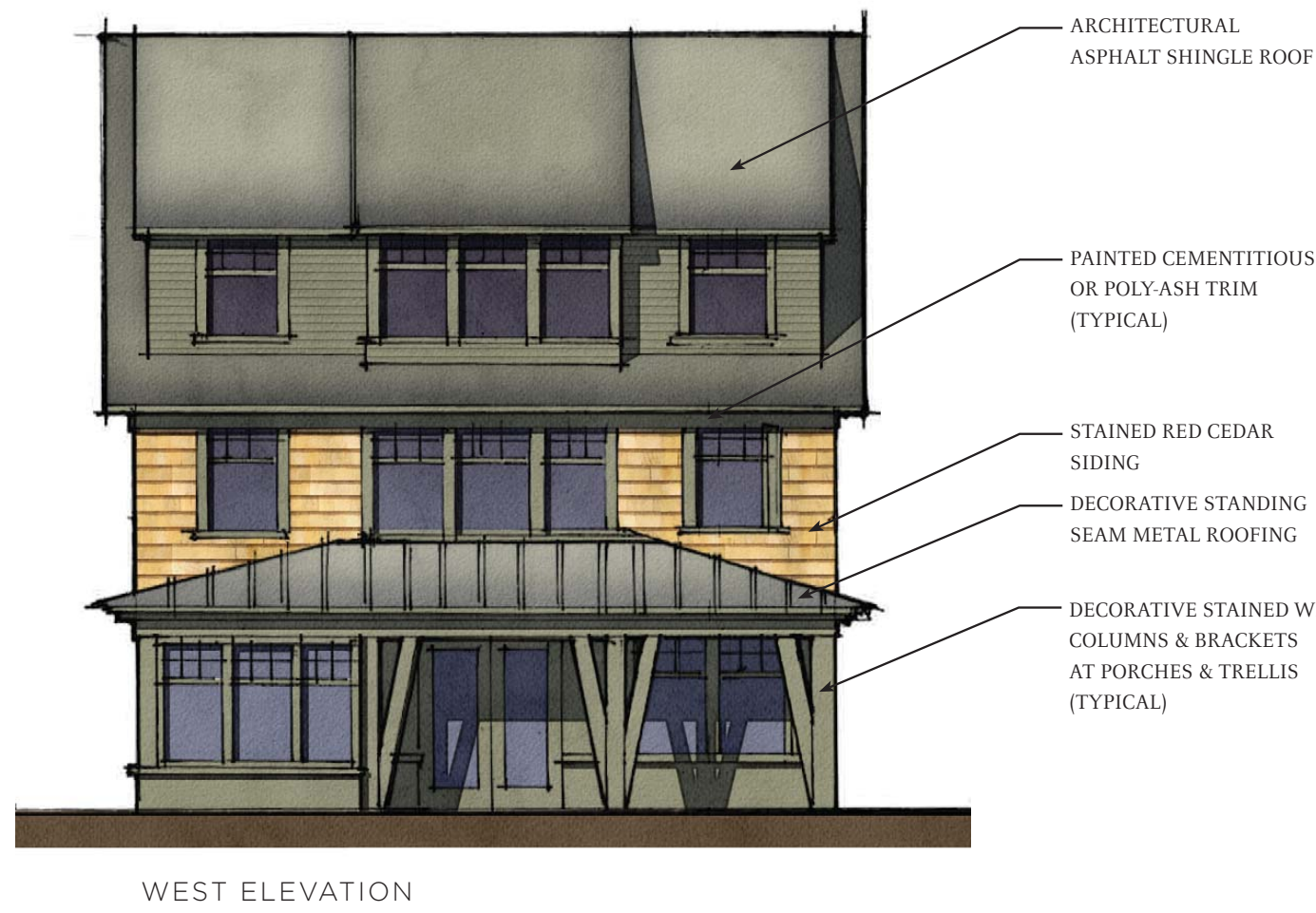
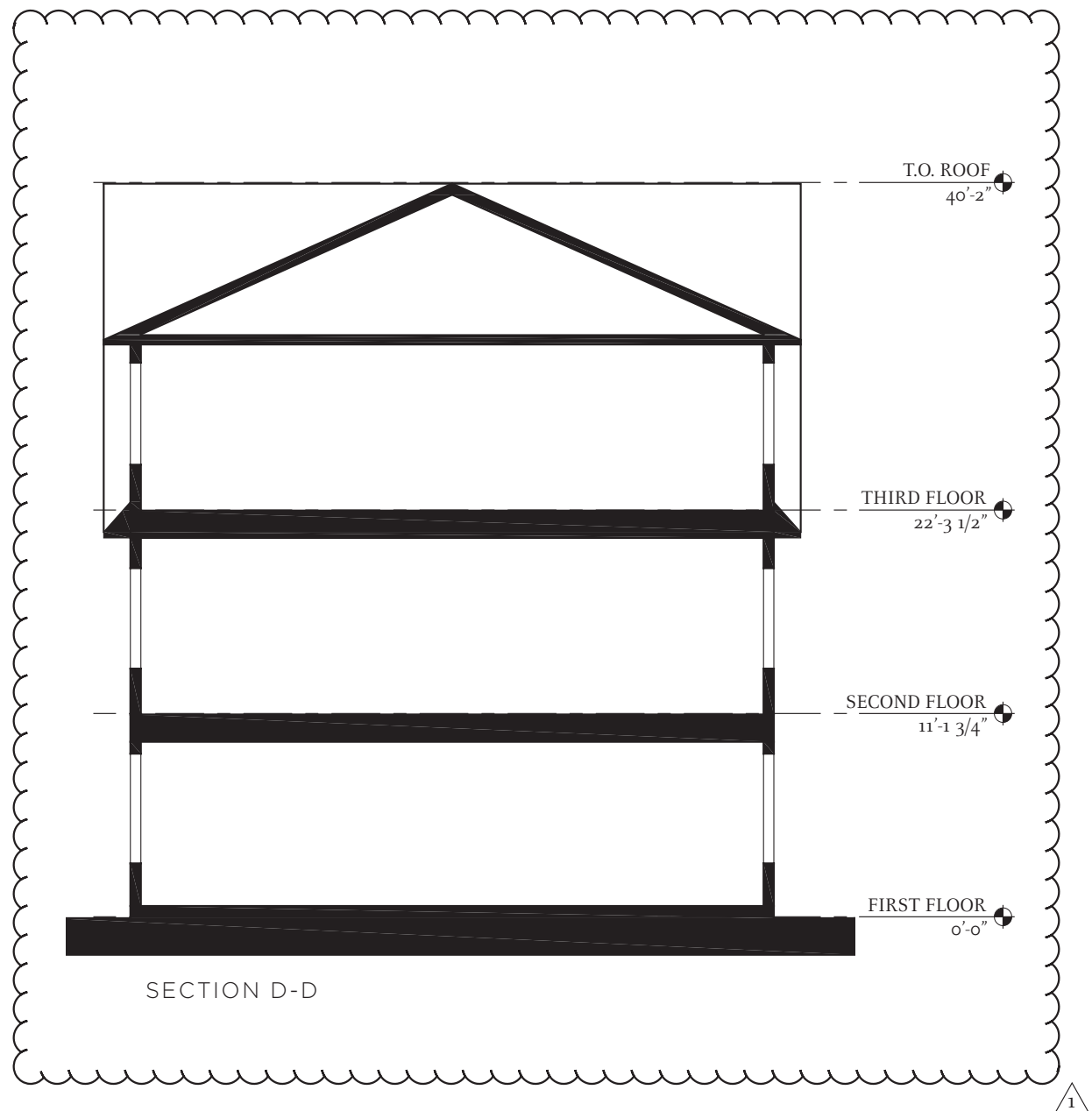
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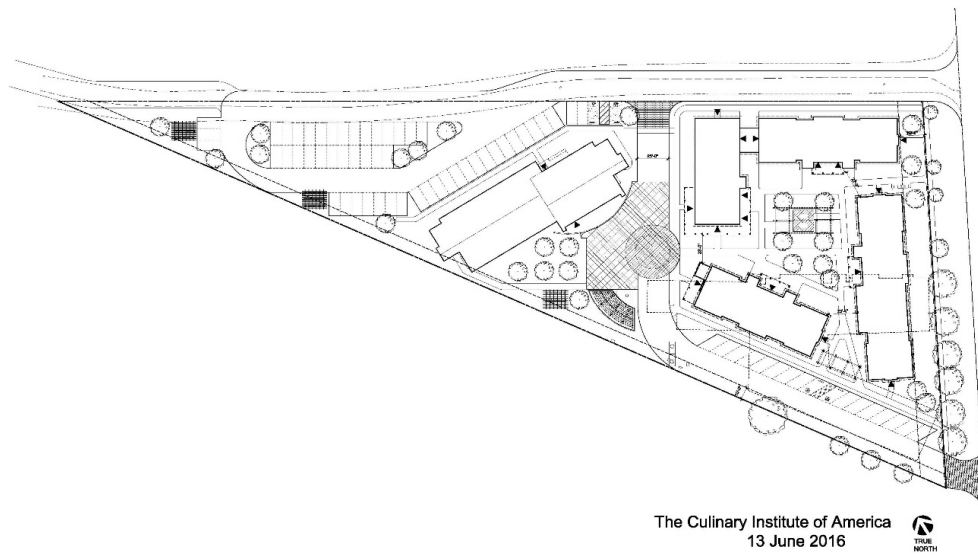


## Memorandum

|                 |                                                                                                                       |
|-----------------|-----------------------------------------------------------------------------------------------------------------------|
| <b>Date:</b>    | June 15, 2016                                                                                                         |
| <b>To:</b>      | Naomi Miroglio, FAIA<br>Architectural Resource Group<br>Pier 9, The Embarcadero, Suite 107<br>San Francisco, CA 94111 |
| <b>From:</b>    | David Buehler, P.E.                                                                                                   |
| <b>Subject:</b> | <b>Culinary Institute of America Vineyard Lodge Noise Study</b>                                                       |

## Introduction

The Culinary Institute of America (CIA) is proposing to expand the student housing facility located at 830 Pratt Avenue, St. Helena, CA. Existing buildings would be demolished and new housing buildings would be constructed. Figure 1 shows the current proposed site layout. This memorandum provides an assessment of noise and vibration impacts associated with construction and operation of the facility. The discussion has been formatted to be consistent with the California Environmental Quality Act (CEQA) checklist for noise impacts.



**Figure 1. Culinary Institute of America Vineyard Lodge**

Culinary Institute of America Vineyard Lodge Noise Study  
 June 15, 2016  
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## Noise Discussion

### Terminology

#### Noise

Sound is mechanical energy (vibration) transmitted by pressure waves over a medium such as air or water. Noise is generally defined as unwanted sound that annoys or disturbs people. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level is the most common descriptor used to characterize the loudness of an ambient (existing) sound level. Although the decibel (dB) scale, a logarithmic scale, is used to quantify sound intensity, it does not accurately describe how sound intensity is perceived by human hearing. The human ear is not equally sensitive to all frequencies in the entire spectrum, so noise measurements are weighted more heavily for frequencies to which humans are sensitive in a process called "A-weighting," written as "dBA" and referred to as "A-weighted decibels". Table 1 provides definitions of sound measurements and other terminology used in this discuss, and Table 2 summarizes typical A-weighted sound levels for different noise sources.

In general, human sound perception is such that a change in sound level of 1 dB cannot typically be perceived by the human ear, a change of 3 dB is just noticeable, a change of 5 dB is clearly noticeable, and a change of 10 dB is perceived as doubling or halving the sound level.

For a point source such as a stationary compressor or construction equipment, sound attenuates based on geometry at rate of 6 dB per doubling of distance. For a line source such as free flowing traffic on a freeway, sound attenuates at a rate of 3 dB per doubling of distance (Caltrans 2013a). Atmospheric conditions including wind, temperature gradients, and humidity can change how sound propagates over distance and can affect the level of sound received at a given location. The degree to which the ground surface absorbs acoustical energy also affects sound propagation. Sound that travels over an acoustically absorptive surface such as grass attenuates at a greater rate than sound that travels over a hard surface such as pavement. The increased attenuation is typically in the range of 1 to 2 dB per doubling of distance. Barriers such as buildings and topography that block the line of sight between a source and receiver also increase the attenuation of sound over distance.

Culinary Institute of America Vineyard Lodge Noise Study  
 June 15, 2016  
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**Table 1. Definition of Sound Measurements**

| Sound Measurements                                 | Definition                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Decibel (dB)                                       | A unitless measure of sound on a logarithmic scale, which indicates the squared ratio of sound pressure amplitude to a reference sound pressure amplitude. The reference pressure is 20 micro-pascals.                                                                                              |
| A-Weighted Decibel (dBA)                           | An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.                                                                                                                                                                                    |
| Maximum Sound Level (L <sub>max</sub> )            | The maximum sound level measured during the measurement period.                                                                                                                                                                                                                                     |
| Minimum Sound Level (L <sub>min</sub> )            | The minimum sound level measured during the measurement period.                                                                                                                                                                                                                                     |
| Equivalent Sound Level (Leq)                       | The equivalent steady state sound level that in a stated period of time would contain the same acoustical energy.                                                                                                                                                                                   |
| Percentile-Exceeded Sound Level (L <sub>xx</sub> ) | The sound level exceeded "x" percent of a specific time period. L <sub>10</sub> is the sound level exceeded 10 percent of the time.                                                                                                                                                                 |
| Day-Night Level (L <sub>dn</sub> )                 | The energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.                                                                                                       |
| Community Noise Equivalent Level (CNEL)            | The energy average of the A-weighted sound levels occurring during a 24-hour period with 5 dB added to the A-weighted sound levels occurring during the period from 7:00 p.m. to 10:00 p.m. and 10 dB added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m. |
| Peak Particle Velocity (Peak Velocity or PPV)      | A measurement of ground vibration defined as the maximum speed (measured in inches per second) at which a particle in the ground is moving relative to its inactive state. PPV is usually expressed in inches/sec.                                                                                  |
| Frequency: Hertz (Hz)                              | The number of complete pressure fluctuations per second above and below atmospheric pressure.                                                                                                                                                                                                       |

Culinary Institute of America Vineyard Lodge Noise Study  
 June 15, 2016  
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**Table 2. Typical A-weighted Sound Levels**

| Common Outdoor Activities         | Noise Level (dBA) | Common Indoor Activities                    |
|-----------------------------------|-------------------|---------------------------------------------|
|                                   | 110               | Rock band                                   |
| Jet flyover at 1,000 feet         |                   |                                             |
|                                   | 100               |                                             |
| Gas lawnmower at 3 feet           |                   |                                             |
|                                   | 90                |                                             |
| Diesel truck at 50 feet at 50 mph |                   | Food blender at 3 feet                      |
|                                   | 80                | Garbage disposal at 3 feet                  |
| Noisy urban area, daytime         |                   |                                             |
| Gas lawnmower, 100 feet           | 70                | Vacuum cleaner at 10 feet                   |
| Commercial area                   |                   | Normal speech at 3 feet                     |
| Heavy traffic at 300 feet         | 60                |                                             |
|                                   |                   | Large business office                       |
| Quiet urban daytime               | 50                | Dishwasher in next room                     |
|                                   |                   |                                             |
| Quiet urban nighttime             | 40                | Theater, large conference room (background) |
| Quiet suburban nighttime          |                   |                                             |
|                                   | 30                | Library                                     |
| Quiet rural nighttime             |                   | Bedroom at night, concert hall (background) |
|                                   | 20                |                                             |
|                                   |                   | Broadcast/recording studio                  |
|                                   | 10                |                                             |
|                                   |                   |                                             |
|                                   | 0                 |                                             |
| Source: Caltrans 2013a.           |                   |                                             |

## Vibration

Operation of heavy construction equipment, particularly pile driving and other impacts devices such as pavement breakers create seismic waves that radiate along the surface of the earth and downward into the earth. These surface waves can be felt as ground vibration. Vibration from operation of this equipment can result in effects ranging from annoyance of people to damage of structures. Varying geology and distance will result in different vibration levels containing different frequencies and displacements. In all cases, vibration amplitudes will decrease with increasing distance.

Perceptible ground-borne vibration is generally limited to areas within a few hundred feet of construction activities. As seismic waves travel outward from a vibration source, they excite the particles of rock and soil through which they pass and cause them to oscillate. The actual distance



Culinary Institute of America Vineyard Lodge Noise Study  
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that these particles move is usually only a few ten-thousandths to a few thousandths of an inch. The rate or velocity (in inches per second) at which these particles move is the commonly accepted descriptor of the vibration amplitude, referred to as the peak particle velocity (PPV).

Table 3 summarizes typical vibration levels generated by construction equipment (FTA 2006).

**Table 3. Vibration Source Levels for Construction Equipment**

| Equipment                    | PPV at 25 feet |
|------------------------------|----------------|
| Pile driver (impact)         | 0.644 to 1.518 |
| Pile drive (sonic/vibratory) | 0.170 to 0.734 |
| Vibratory roller             | 0.210          |
| Hoe ram                      | 0.089          |
| Large bulldozer              | 0.089          |
| Caisson drilling             | 0.089          |
| Loaded trucks                | 0.076          |
| Jackhammer                   | 0.035          |
| Small bulldozer              | 0.003          |
| Source: FTA 2006.            |                |

Vibration amplitude attenuates over distance and is a complex function of how energy is imparted into the ground and the soil conditions through which the vibration is traveling. The following equation can be used to estimate the vibration level at a given distance for typical soil conditions (FTA 2006). PPV<sub>ref</sub> is the reference PPV from TableXII-3:

$$PPV = PPV_{ref} \times (25/Distance)^{1.5}$$

Tables 4 and 5 summarize guidelines developed by Caltrans for damage and annoyance potential from transient and continuous vibration that is usually associated with construction activity. Equipment or activities typical of continuous vibration include: excavation equipment, static compaction equipment, tracked vehicles, traffic on a highway, vibratory pile drivers, pile-extraction equipment, and vibratory compaction equipment. Equipment or activities typical of single-impact (transient) or low-rate repeated impact vibration include: impact pile drivers, blasting, drop balls, "pogo stick" compactors, and crack-and-seat equipment (Caltrans 2013b).

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 June 15, 2016  
 Page 6 of 15

**Table 4. Guideline Vibration Damage Potential Threshold Criteria**

| Structure and Condition                                                                                                                                                                                                                                                                 | Maximum PPV (in/sec) |                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|------------------------------------------|
|                                                                                                                                                                                                                                                                                         | Transient Sources    | Continuous/Frequent Intermittent Sources |
| Extremely fragile historic buildings, ruins, ancient monuments                                                                                                                                                                                                                          | 0.12                 | 0.08                                     |
| Fragile buildings                                                                                                                                                                                                                                                                       | 0.2                  | 0.1                                      |
| Historic and some old buildings                                                                                                                                                                                                                                                         | 0.5                  | 0.25                                     |
| Older residential structures                                                                                                                                                                                                                                                            | 0.5                  | 0.3                                      |
| New residential structures                                                                                                                                                                                                                                                              | 1.0                  | 0.5                                      |
| Modern industrial/commercial buildings                                                                                                                                                                                                                                                  | 2.0                  | 0.5                                      |
| Note: Transient sources create a single isolated vibration event, such as blasting or drop balls.<br>Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment. |                      |                                          |

**Table 5. Guideline Vibration Annoyance Potential Criteria**

| Structure and Condition                                                                                                                                                                                                                                                                 | Maximum PPV (in/sec) |                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|------------------------------------------|
|                                                                                                                                                                                                                                                                                         | Transient Sources    | Continuous/Frequent Intermittent Sources |
| Barely perceptible                                                                                                                                                                                                                                                                      | 0.04                 | 0.01                                     |
| Distinctly perceptible                                                                                                                                                                                                                                                                  | 0.25                 | 0.04                                     |
| Strongly perceptible                                                                                                                                                                                                                                                                    | 0.9                  | 0.10                                     |
| Severe                                                                                                                                                                                                                                                                                  | 2.0                  | 0.4                                      |
| Note: Transient sources create a single isolated vibration event, such as blasting or drop balls.<br>Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment. |                      |                                          |

## Regulatory Setting

### City of St. Helena Municipal Code

The City of St. Helena Municipal Code Section 8.24 relates to noise. Section 8.24.10B relates to “unnecessary noises” in general and states the following:

Between the hours of ten p.m. and seven a.m. next ensuing, no commercial or other activity shall be conducted upon any privately owned real property within the city which activity creates noise which can be heard at the property line of any parcel of real property within the city, unless a permit shall first have been secured from the chief of police.

Culinary Institute of America Vineyard Lodge Noise Study  
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Section 8.24.10C relates to construction noise and states:

1. Monday through Saturday. Construction activities which generate noise that can be heard at the property line of any parcel of real property within the city limits shall be limited to eight a.m. to five p.m. Delivery of materials/equipment and cleaning and servicing of machines/equipment shall be limited to seven a.m. to six p.m. Exceptions to these time restrictions may be granted by the public works director for one of the following reasons: (a) inclement weather affecting work; (b) emergency work; or (c) other work, if work and equipment will not create noise that may be unreasonably offensive to neighbors as to constitute a nuisance. The city engineer must be notified and give approval in advance of such work.
2. Sundays and Holidays (Federal and Local). No construction activities allowed which generate noise that can be heard at the property line of any parcel of real property within the city limits.

## City of St. Helena General Plan

Chapter 8.0 Public Health and Safety Element of the City of St. Helena General Plan includes a section on noise. The purpose of this section of the element is to provide a basis for establishing comprehensive local programs to control and abate environmental noise, and to protect citizens from excessive noise exposure.

The element applies California Noise Insulation Standards sound for limiting interior noise from exterior sources. The Standards set forth an interior standard of 45 dB, CNEL (or Ldn) in any habitable room, and require an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to noise levels greater than CNEL (or Ldn) of 60 dB.

If all doors and windows are required to be closed in order to meet the interior noise standards, then the Standard requires that the design of the structure must also specify a ventilation or air conditioning system to provide a habitable interior environment. The ventilation system must not compromise the dwelling unit isolation from the exterior. Wall NC units are not acceptable as a response to this requirement. If any portion of the dwelling must have closed windows, then the entire dwelling must satisfy this ventilation provision.

The element also specifies noise land use compatibility guidelines. For residential land uses the following guidelines are stated:

- Less than 55 Ldn or CNEL – completely compatible
- 55 to 60 Ldn or CNEL – tentatively compatible
- 60 to 65 Ldn or CNEL – normally incompatible
- 65 to 70 Ldn or CNEL – completely incompatible

These compatibility terms are defined as follows:

Completely Compatible: the noise exposure is such that both the indoor and outdoor environments are pleasant, as long as noise sources do not cause the ambient noise to increase more than 5 dBA, and in the absence of intrusive and intermittent noise.

Culinary Institute of America Vineyard Lodge Noise Study  
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**Tentatively Compatible:** the noise exposure is great enough to be of concern, but common building construction practices will make the living indoor environment acceptable, even for sleeping quarters, and the outdoor environment will be reasonably pleasant for recreation and play.

**Normally Incompatible:** the noise exposure is so severe that unusual and costly building construction is necessary to ensure some tranquility inside one's home, and barriers must be erected between the site and prominent noise sources to make the outdoor environment tolerable.

**Completely Incompatible:** the noise exposure at the site is so severe that construction costs to make the indoor living environment acceptable would be prohibitive and the outdoor environment would still be intolerable.

## Environmental Setting

### Noise Sensitive Land Uses

The project area is generally rural. A residence is located directly southeast of the project site across Pratt Avenue. A residential subdivision is located further south across Pratt avenue. Several other single family residences are location about 250 feet or further northeast of the project across Pratt Avenue. See Figure 1. A large winery operation is located southwest of the project site.

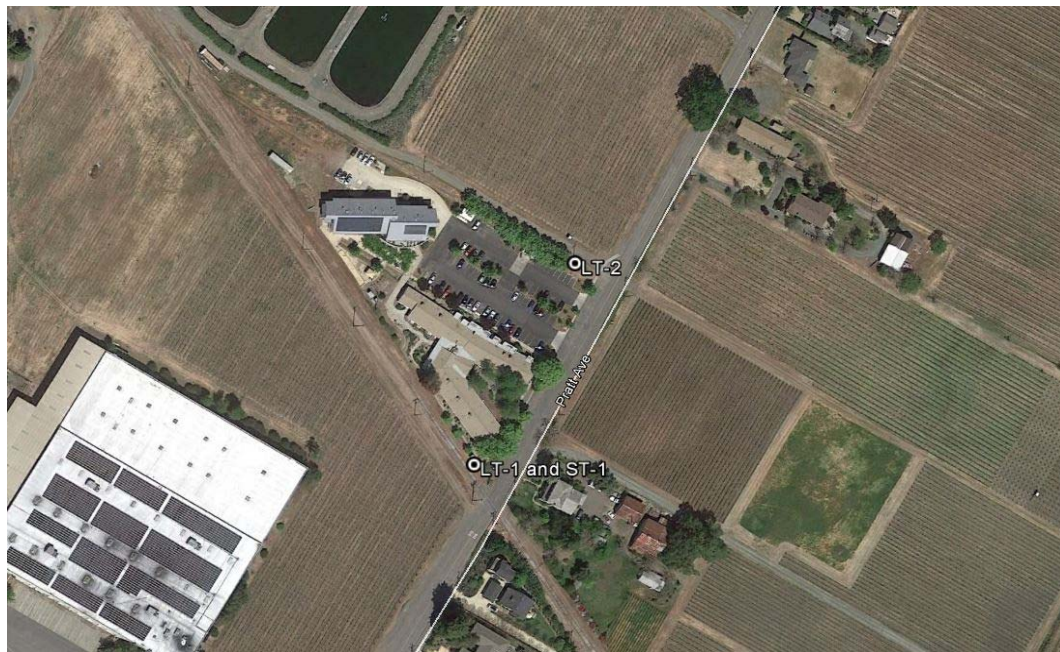


Figure 2. Noise Monitoring Positions

## Existing Noise Conditions

Traffic on Pratt Avenue is the primary source of noise in the project area but traffic volumes are low. The posted speed is 35 mph. The train track located on the southwest side of the project site has not been in use for many years. However, use of the track by the Napa Wine Train has recently commenced. Trains pass twice a day 7 days per week at approximately 1:00 p.m. and 2:00 p.m.

Noise monitoring was conducted on the project site to characterize existing noise levels in the project area. Noise monitoring positions are shown in Figure 2. Sound levels measured at Position LT-1 are considered to be representative of sound level at the residence located directly across Pratt Avenue. A short-term (15-minute) measurement was taken using a Larson-Davis 831 Type 1 sound level meter at Position ST-1 on Friday April 29 beginning at 11:10 a.m. During this time 14 automobiles and 1 heavy truck passed the project site. The posted speed is 35 mph. The equivalent sound level measured during this period was 55.4 dBA.

Unattended continuous sound level measurements were also taken at Positions LT-1 and LT-2 using Piccolo Type 2 sound level meters starting on Friday April 29 and continuing through Wednesday May 4. The Napa Wine Train was not operating during this time. The existing CIA facility was unoccupied as students were on break. These measured noise levels therefore represent the lowest noise levels likely to be encountered in the area. Table 6 summarizes measured sound levels values at each position.

**Table 6. Summary of Measured Long-Term Sound Levels**

| Position                                                            | Day          |              |              |              |
|---------------------------------------------------------------------|--------------|--------------|--------------|--------------|
| LT-1                                                                | Saturday     | Sunday       | Monday       | Tuesday      |
| Daytime $L_{eq}$ Range (dBA)                                        | 53.9 to 60.4 | 55.3 to 60.6 | 51.8 to 61.2 | 51.2 to 61.4 |
| Nighttime $L_{eq}$ Range (dBA)                                      | 49.1 to 57.2 | 49.1 to 57.7 | 49.1 to 56.1 | 47.7 to 62.0 |
| $L_{dn}$                                                            | 61.6         | 61.2         | 61.7         | 62.7         |
| LT-2                                                                | Saturday     | Sunday       | Monday       | Tuesday      |
| Daytime $L_{eq}$ Range (dBA)                                        | 52.5 to 69.1 | 51.0 to 57.1 | 50.0 to 63.0 | 50.7 to 64.2 |
| Nighttime $L_{eq}$ Range (dBA)                                      | 47.6 to 58.8 | 44.5 to 51.2 | 43.4 to 55.6 | 40.8 to 48.5 |
| $L_{dn}$                                                            | 63.0         | 56.6         | 59.4         | 62.6         |
| Daytime: 7:00 a.m. to 10:00 p.m. Nighttime: 10:00 p.m. to 7:00 a.m. |              |              |              |              |

Overall these noise measurements indicate that the noise environment in the project area is generally quiet and consistent with the rural setting.

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## CEQA Checklist Responses

- a. **Would the project expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?**

### **Construction Noise**

Construction of the proposed project will involve demolition of existing buildings and construction of new buildings. Details on construction phasing and specific types of equipment have not yet been determined. However, a reasonable assessment of construction noise can be made based on noise levels associated with typical residential construction developed by the U.S. Environmental Protection Agency (EPA 1971). Table 7 summarizes typical noise levels generated by common construction phases. Equipment to be used for demolition is expected to generate noise similar to ground clearing.

**Table 7. Demolition and Construction Noise**

| Construction Phase                  | Housing<br>Distance from Construction (feet)<br>Sound Level (dBA) |    |     |     |     |     |
|-------------------------------------|-------------------------------------------------------------------|----|-----|-----|-----|-----|
|                                     | 50                                                                | 75 | 100 | 200 | 400 | 800 |
| Ground Clearing*                    | 85                                                                | 81 | 79  | 73  | 67  | 61  |
| Excavation                          | 89                                                                | 85 | 83  | 77  | 71  | 65  |
| Foundations                         | 82                                                                | 79 | 76  | 70  | 64  | 58  |
| Building/Facility Construction      | 81                                                                | 78 | 75  | 69  | 63  | 57  |
| Finishing and Clean-up              | 86                                                                | 83 | 80  | 74  | 68  | 62  |
| Source: EPA 1971                    |                                                                   |    |     |     |     |     |
| *Demolition expected to be similar. |                                                                   |    |     |     |     |     |

The closest residence is located about 75 feet from the nearest building. The construction noise data in Table 3 indicates that demolition and construction activity could result in noise in the range of 78 to 85 dBA at the nearest residence. Construction activity that occurs outside of the hours identified in Section 8.24.10C of the Municipal Code would result in noise that is in excess the applicable local noise standard. This impact is therefore considered to be significant. Implementation of Mitigation Measure NOI-1 would reduce this impact to a less-than-significant level by limiting construction to the hours allowed in the municipal code.

### **Mitigation Measure NOI-1: Limit hours of noise-generating demolition and construction activity**

The project applicant's construction contractor shall limit the hours when noise-generating demolition and construction activity occurs on the project site in accordance with Section 8.24.10C of the City of St. Helena municipal code. Construction activities which generate noise

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that can be heard at the property line of any parcel of real property within the city limits shall be limited to the days of Monday through Saturday between the hours of eight a.m. to five p.m. Delivery of materials/equipment and cleaning and servicing of machines/equipment shall be limited to seven a.m. to six p.m.

#### ***Operational Noise – Traffic***

The traffic study conducted by Crane Transportation Group indicates that during the AM and PM peak hours, the project will add 4 trips (AM) and 8 trips (PM) to Pratt Avenue west of the project site and 4 trips (AM) and 4 trips (PM) trips east of the project site. The existing AM and PM peak hour traffic volumes are 100 and 129 west of the project site respectively and 90 and 117 east of the project site respectively. The addition of eight and four trip from the project in each direction will increase traffic noise by less than 0.5 dB. This is well below the threshold of a perceptible change (3 dB). As such implementation of the proposed project will not substantially increase traffic noise in the area. This impact is therefore less than significant and no mitigation is required.

Measurements taken on the project site indicate that existing traffic noise levels at the project site are in the range of 57 to 63 Ldn. Conventional building construction with windows closed is expected to reduce exterior noise by at least 20 dB at interior locations (FHWA 2011). Accordingly interior noise levels at the new facility are expected to be 45 Ldn or less which is compliance with the City standard for interior noise. This impact is therefore less than significant and no mitigation is required.

#### ***Operational Noise – Napa Wine Train***

Two passages of the Napa Wine Train during daytime hours would result in audible sound at the facility. However, because of the slow speed of the train and the short duration of each passage, this would not result in an adverse effect to the facility. This impact is therefore less than significant and no mitigation is required.

#### ***Operational Noise – Mechanical Systems***

Mechanical systems associated with heating, ventilation, and air conditioning may generate noise. The specific details on the design and location of these systems has not yet been determined. Operation of these systems could result in noise at nearby residences that is above the existing ambient noise level depending on the design and location of the systems. Accordingly, operation of these systems could result in an exceedance of the Municipal Code standard Section 8.24.10B which states that no commercial or other activity may create noise that can be heard at the property line of any private property between the hours of 10:00 p.m. and 7:00 a.m. This impact is therefore considered to be significant. Implementation of Mitigation Measure NOI-2 would reduce this impact to a less-than-significant level by limiting noise generated by mechanical equipment.

#### **Mitigation Measure NOI-2: Design mechanical systems to limit noise**

Mechanical systems for the project shall be designed and operated such that noise is in compliance with Section 8.24.10B of the City of St. Helena municipal code. Mechanical systems



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shall be designed such that noise from the operation of the system cannot be heard at the property line of any private property between the hours of 10:00 p.m. and 7:00 a.m.

***Operational Noise – Student Activities***

The facility will have a central quad area that may be used as a gathering place for students. Events such as barbeques and other social events could be held in the quad. Gatherings could include up to 120 students who would live on the site. Residential neighbors near the project site have expressed concern that these gatherings and other activities could generate noise.

A person speaking in a normal voice produces a sound level of about 57 dBA at 1 meter (Harris 1979). This corresponds to a sound level of about 33 dBA at 50 feet. Under a worst case scenario 120 people could be speaking at the same time at an outdoor event in the quad. The cumulative sound level would be about 54 dBA at 50 feet. The nearest residence is about 260 feet from the center of the quad. A sound level of 54 dBA at 50 feet would drop to about 47 dBA at 260 feet assuming attenuation of 6 dB per doubling of distance. In addition the new buildings will surround the quad providing acoustical shielding of at least 5 dB between the quad and the nearest residence. The resulting sound level at the nearest residence would be about 42 dBA. This is well below the measured daytime ambient sound levels that are in the range of 50 to 64 dBA. Note that the existing measured noise levels were taken when the facility was unoccupied by students and represent the lowest noise levels likely to be encountered in the area. This analysis therefore represents a worst-case assessment because existing noise levels with the facility occupied could be slightly higher.

In addition several rules will be in place for limiting noise generated by these activities:

- No amplified music will be allowed outside.
- The current 9:30 p.m. curfew for noise generated by students will be continued and enforced.
- Non-residents would not be allowed to attend events in the quad.

Given the presence of this acoustical shielding and the rules that will be in place, student activities are not expected to result in noise that can be heard at the property line between the hours of 10:00 p.m. and 7:00 a.m. Accordingly, these activities are not expected to result in noise that exceeds applicable local noise standards. This impact is therefore considered to be less than significant. No mitigation is required.

**b. Would the project expose persons to or generate excessive groundborne vibration or groundborne noise levels?**

Construction activity could occur as close as about 75 feet from nearby residences. Table 8 summarizes projected vibration levels at 50 feet for equipment that is likely to be used for this project (FTA 2006).

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**Table 8. Vibration Levels for Construction Equipment**

| Equipment        | PPV at 75 feet | Perception*            |
|------------------|----------------|------------------------|
| Vibratory roller | 0.0404         | Distinctly perceptible |
| Large bulldozer  | 0.0171         | Barely perceptible     |
| Loaded trucks    | 0.0146         | Barely perceptible     |
| Jackhammer       | 0.0067         | Barely perceptible     |
| Small bulldozer  | 0.0006         | Not perceptible        |

Source: FTA 2006.  
 \*based on Table 5.

The results in Table 8 indicate that construction activity could result in vibration that is barely to distinctly perceptible at the nearest residence but is not at a level that could cause damage to nearby structures. Because periods of perceptible vibration would be brief and temporary, the project is not expected to expose people to excessive groundborne vibration. This impact is less than significant. No mitigation is required.

Two passages of the Napa Wine Train during daytime hours could result in perceptible ground vibration at the facility. However, because of the slow speed of the train and the short duration of each passage, this would not result in an adverse effect to the facility. This impact is therefore less than significant and no mitigation is required.

**c. Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?**

***Operational Noise – Traffic***

As discussed above the project applicant has determined that operation of the project will not increase trip generation relative to existing uses on the project site. As such implementation of the proposed project will not increase traffic noise in the area. This impact is therefore less than significant. No mitigation is required.

***Operational Noise – Mechanical Systems***

As discussed above, mechanical systems associated with heating, ventilation, and air conditioning may generate noise. The specific details on the design and location of these systems has not yet been determined. Operation of these systems could result in noise at nearby residences that is above the existing ambient noise level depending on the design and location of the systems. Accordingly, operation of these systems could result in an exceedance of the Municipal Code standard Section 8.24.10B which states that no commercial or other activity may create noise that can be heard at the property line of any private property between the hours of 10 p.m. and 7:00 a.m. This would constitute a substantial permanent increase in noise. This impact is therefore considered to be significant. Implementation of Mitigation Measure NOI-2 would reduce this impact to a less-than-significant level by limiting noise generated by mechanical equipment.

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 June 15, 2016  
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***Operational Noise – Student Activities***

As discussed above the facility will have a central quad area that may be used as a gathering place for students. Events such as barbeques and other social events could be held in the quad. Gatherings could include up to 120 students who would live on the site. Residential neighbors near the project site have expressed concern that these gatherings and other activities could generate noise. As discussed above the sound level of 120 speaking is predicted to be about 42 dBA at the nearest residences. With existing daytime sound level in the range of 50 to 64 dBA gatherings at the quad are not expected to result in a substantial increase in noise.

In addition, several rules will be in place for limiting noise generated by these activities:

- No amplified music will be allowed outside.
- The current 9:30 p.m. curfew for noise generated by students will be continued and enforced.
- Non-residents would not be allowed to attend events in the quad.

Given the presence of this acoustical shielding and the rules that will be in place, student activities are not expected to result in noise that can be heard at the property line between the hours of 10:00 p.m. and 7:00 a.m. or in a substantial increase above existing conditions. This impact is therefore considered to be less than significant. No mitigation is required.

**d. Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?**

The discussion of construction noise above indicates that construction activity will result in a temporary increase in noise during the construction period. However, with implementation of Mitigation Measure NOI-1 noise from construction activity will be in compliance with City standards. Because of this, the potential temporary increase in noise associated with construction is not considered to be substantial. This impact is therefore considered to be less than significant.

**e. Would the project be located within an airport land use plan area, or, where such a plan has not been adopted, within two miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels?**

The proposed project is not located within two miles of a public airport or public use airport and would not expose people residing or working in the project area to excessive noise levels.

**f. Would the project be located in the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels?**

The proposed project is not located in the vicinity of a private airstrip and would not expose people residing or working in the project area to excessive noise levels.

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## References

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- Caltrans. 2013b. Transportation and construction vibration guidance manual. Sacramento, CA.
- Federal Highway Administration. 2011. Highway traffic noise: analysis and abatement guidance. Washington, D.C.
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- U.S. Environmental Protection Agency. 1971. Noise from construction equipment and operations, building equipment, and home appliances. Washington, D.C.



# MEMO

|          |                                 |              |                      |
|----------|---------------------------------|--------------|----------------------|
| To:      | City of St Helena               | From:        | Jason M. Roberts, PE |
| Project: | CIA Use Permit                  | Project No.: | 2016040              |
| Re:      | Roundabout Feasibility Analysis | Date:        | October 21, 2016     |

A conceptual layout for a roundabout at the intersection of Pratt Ave and Hwy 29 has been completed. Please see the attached concept drawing for details. The roundabout dimensions used for the analysis were confirmed suitable by City staff, and are as follows:

- ♣ Inscribed circle diameter: 130 feet
- ♣ Shoulder width: 2 feet
- ♣ Shared pedestrian/bikeway: 8 feet
- ♣ Overall roundabout diameter: 150 feet

Based on the required roundabout dimensions, and the physical constraints of the intersection, it is evident that a roundabout is infeasible for the following reasons:

1. The intersection is a 3-way intersection, with a driveway connection to the south that serves a hotel complex nearing completion. The intent of a roundabout is to keep traffic moving through the roundabout without stopping. An accident hazard could be created by the roundabout if vehicles need to slow down in the middle of the roundabout to enter a driveway.
2. The driveway mentioned above has a significant existing incline from Pratt Ave to the level of the hotel located on the property. Construction of a roundabout will require a massive grading and retaining wall effort in order to accommodate the size of the roundabout.
3. A historic rock wall is located along the Hwy 29 that will have to be removed in order to accommodate the roundabout.
4. Public ROW easements will have to be negotiated with at least 3 properties in the vicinity of the intersection. In addition, the shared pedestrian/bikeway will encumber on the residence at 1872 Main St on the east corner of the intersection, not to mention obliterating the front and side yard setbacks required by the Zoning Code for MDR.
5. The relocation of 4 utility poles and associated overhead lines will be required, with new locations encroaching further onto affected parcels.

I hope our conclusion based on the attached site plan have satisfactorily proven the infeasibility of a roundabout at the intersection of Pratt Ave and Hwy 29. Please let me know if you have any questions.

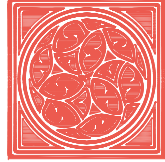
Jason M. Roberts, PE  
Project Engineer  
Encl: Exhibit A: Roundabout Concept





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24"x36" OR 22"x34" SHEET SIZE. IF SHEET IS SMALLER, THEN DRAWING HAS BEEN REDUCED.



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| NO.       | DESCRIPTION | DATE |
|-----------|-------------|------|
| REVISIONS |             |      |

### THE CULINARY INSTITUTE OF AMERICA

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830 PRATT AVENUE  
ST. HELENA, CALIFORNIA

SHEET TITLE  
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11208.03

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JLG

DRAWING NO.  
**EXHIBITA**





Architectural  
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August 14, 2016

Noah Housh  
Planning and Community Improvement Director  
City of St. Helena  
1480 Main Street  
St. Helena, Ca 94574

RE: 2555 Main St, the Greystone Site (PL16-042) Use Permit, Design Review

## INTRODUCTION

The historic Greystone Winery, now the home of The Culinary Institute of America (CIA), Greystone campus, is listed on the National Register of Historic Places, the California Register of Historic Resources and is a local St. Helena Landmark. As an 'historical resource', the project is subject to review under the California Environmental Quality Act (CEQA). However, under CEQA Guidelines 15331 Class 31, projects that follow *Standards for Rehabilitation (Rehabilitation Standards)* contained within *The Secretary of the Interior's Standards for the Treatment of Historic Properties* are exempt.

As described in the Use Permit and Design Review documents submitted in June 2016, the CIA proposes to implement a Master Plan with interior improvements to provide additional and more efficient educational facilities within the historic building. As part of this program, three small exterior additions are proposed on the west side of the building. The following summary describes these small additions and evaluates their compliance with the Secretary of the Interior Standards for Rehabilitation.

## PROPOSED PROJECT

Exterior modifications for the proposed project are limited to three small storage additions along the access drive behind the historic winery building. The additions are located to work around existing HVAC units and back-of-house equipment that support the needs of the teaching kitchens. Building and equipment maintenance storage that is currently located in significant ground floor spaces will be relocated to this area:

- The additions will be accessed from the existing roadway, and will be supported on new structure that spans across the existing exterior breezeway in a similar fashion to the support structures for the large HVAC units.
- The additions measure 19'-4" x 59'-10", 19'-4" x 38'-4" and 19'-4" x 37'-8" and are 9'-8 ½" tall. They will be constructed to fit below the height of the existing eave line of the historic building. They will be utilitarian in nature, with painted metal siding, painted metal doors and flat roofs behind small parapets.

**Secretary of the Interior Standards Compliance**

The compliance of the proposed additions is reviewed below with respect to the *Rehabilitation Standards*.

Each of the Standards are listed below in italics, with a response providing a discussion regarding the proposed project's consistency or inconsistency with each standard.

1. *A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.*

The proposed project is consistent with this Standard. The culinary school use has required minimal change throughout the historic masonry winery building. The addition of three small storage buildings located on the rear of the building will not cause alterations to the character defining features of the building.

2. *The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.*

The proposed project is consistent with this Standard. There is no removal of historic materials for installation of the storage additions.

3. *Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.*

The proposed project is consistent with this Standard. No features or elements that would create a false sense of history are proposed in the project.

4. *Most properties change over time; those changes that have achieved historic significance in their own right shall be retained and preserved.*

The proposed project is consistent with this Standard. The historic building is being retained in its current configuration, including alterations that have been constructed over time.

*5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.*

The proposed project is consistent with this Standard. The distinctive masonry features and finishes will be preserved.

*6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.*

The proposed project is consistent with this Standard. The proposed project does not include replacement of any character defining features.

*7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.*

The proposed project is consistent with this Standard. Surface cleaning is not proposed for this project.

*8. Significant archaeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.*

The proposed project is consistent with this Standard. The additions will be constructed over existing structure, so no ground disturbance is anticipated.

*9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old*

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*and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.*

The proposed project is consistent with this Standard. The new additions do not require removal of any historic material. They are located on the rear of the building, so protect the primary views of the significant architectural features that characterize the property. The buildings have been designed to fit beneath the eave of the existing historic building. The scale and massing of the three small additions is minimal compared to the scale and massing of the original structure. The materials proposed differentiate the additions from the historic masonry construction.

*10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.*

The proposed project is consistent with this Standard. In the future, the storage additions could be removed, and the original form and integrity of the historic Greystone building would be intact.

#### **Conclusion**

The proposed storage additions are a minor alteration, and meet the Secretary of the Interior Standards for Rehabilitation. As a result of meeting the Standards, the project can be considered as mitigated to a level of less than a significant impact on the historic resource.

Prepared by:



Naomi Miroglio  
Principal



Image 1. Existing Rear Elevation of Greystone Building – view from northwest



Image 2. Existing breezeway – View from northwest





Image 3. Existing breezeway/rear elevation of Greystone building – View from southwest



Image 4. Existing stairs at central gable – View from southwest



Image 5. Existing mechanical equipment – View from southwest



Image 6. Existing mechanical equipment – View from northwest



*Architects,  
Planners &  
Conservators*



Image 7. Existing stair and mechanical equipment at south gable – view from west

## STORMWATER CONTROL PLAN FOR A REGULATED PROJECT

Culinary Institute of America  
Vineyard Lodge Use Permit

**Prepared for:**

Culinary Institute of America  
830 Pratt Ave  
St. Helena, CA 94574  
(415) 421-1680

**Prepared by:**

Summit Engineering, Inc.  
463 Aviation Blvd, Suite 200  
Santa Rosa, CA 95403  
Phone: 707-527-0775



Project No. 2016140  
June 21, 2016  
Updated: September 2 , 2016

**CIA VINEYARD LODGE USE PERMIT**  
 Project No. 2016040  
 August 18, 2016

**SUMMIT ENGINEERING, INC.**  
 Stormwater Control Plan

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Vicinity Map

Stormwater Control Plan and Drainage Map

This Stormwater Control Plan was prepared using the template dated July 11, 2014.

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**I. PROJECT DATA**

Table 1. Project Data

|                                                |                                                                                                                                                                                                              |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Project Name/Number                            | CIA Vineyard Lodge Use Permit/2016040                                                                                                                                                                        |
| Application Submittal Date                     | June 21, 2016                                                                                                                                                                                                |
| Project Location                               | 830 Pratt Ave, St. Helena, CA 94574/ APN 009-010-024                                                                                                                                                         |
| Project Phase No.                              | N/A                                                                                                                                                                                                          |
| Project Type and Description                   | Project Type: Regulated – This project consists of the demolition of the existing parking lot and dormitory building and the construction of four new dormitory lodges, access drive, and new parking areas. |
| Total Project Site Area                        | 2.95 acres                                                                                                                                                                                                   |
| Total New and Replaced Impervious Surface Area | 70,366 sqft (1.62acres)                                                                                                                                                                                      |
| Total Pre-Project Impervious Surface Area      | 66,211 sqft (1.52acres)                                                                                                                                                                                      |
| Total Post-Project Impervious Surface Area     | 70,366 sqft (1.62acres)                                                                                                                                                                                      |

**II. SETTING****II.A. Project Location and Description**

The CIA Vineyard Lodge project site is approximately 2.95 acres and located at 830 Pratt Ave, St. Helena, CA. The project site is located approximately one mile northwest of the Town of St. Helena, 0.3 miles northeast of State Road 128, 0.2 miles west of York Creek, and has approximate coordinates of 38.513583° N & 122.475675° W. See the Vicinity Map.

**II.B. Existing Site Features and Conditions**

The project site currently consists of a parking lot and two dormitory buildings. The area surrounding the project boundary consists of vineyards and agricultural land. The project site is relatively flat with average slopes approximately 1% towards the eastern portion of the property. The elevation of the project site ranges from 243 to 250 feet above mean sea level (msl). Surface stormwater runoff from the site generally sheet flows towards the trapezoidal ditch located along the northeast property line and outlets via a valley gutter in a road side swale along Pratt Avenue. Drainage from the site eventually discharges to the Napa River.

Based on mapping from the National Resources Conservation Service (NRCS) Web Soil Survey, the project site soils are classified as Bale loam clay (104 and 105); both being in Hydrologic Soil Group "B". According to the NRCS, Hydrologic Soil Group "B" consists of soils having a moderate infiltration rate when thoroughly wet, consisting chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

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**II.C. Opportunities and Constraints for Stormwater Control**

Landscaped areas located throughout the project site can be utilized for bioretention facilities and self-retaining areas. The soil at the project site also allows for moderate infiltration.

Constraints for drainage at the site include the relative flat site with average slopes of approximately 1%.

**III. LOW IMPACT DEVELOPMENT DESIGN STRATEGIES****III.A. Optimization of Site Layout****III.A.1. Limitation of development envelope**

Project limitations such as the minimal slope at the site require many of the landscape areas to be self-retaining areas. LID Facilities (SCMs) are proposed to be adjacent to the proposed impervious areas not draining to self-treating areas. Landscaped areas shall be provided throughout the site to promote infiltration and treatment.

**III.A.2. Preservation of natural drainage features**

Constructed vegetated swales are currently at the site. The existing drainage pattern for the site shall be preserved where feasible.

**III.A.3. Setbacks from creeks, wetlands, and riparian habitats**

Development is not proposed to be performed within 20 feet or more of nearby creeks and riparian habitats.

**III.A.4. Minimization of imperviousness**

Impervious surfacing of the site shall be minimized with landscaped areas adjacent to proposed improvements.

**III.A.5. Use of drainage as a design element**

Grass-line interceptor swales adjacent to a portion of impervious area shall be utilized for both treatment and aesthetics and convey runoff to LID facilities.

**III.B. Use of Permeable Pavements**

Permeable pavements shall be used on this project for majority of the sidewalk areas as well as the non-accessible parking stalls. Design of the pervious pavers shall be in accordance with the information in "Criteria for Pervious Pavements" on page 4-6 of the BASMAA Post-construction manual.

**III.C. Dispersal of Runoff to Pervious Areas**

Runoff from Area 37 will sheetflow onto the adjacent vineyards and roadside drainage.

**III.D. Stormwater Control Measures**

This project will follow the "Design Guidance for Stormwater Treatment and Control for Projects in Marin, Sonoma, Napa, and Solano Counties (DGSTC)", prepared for the Bay Area Stormwater Management Agencies Association (BASMAA). Bio-retention LID Facilities are sized at a minimum of 4% of the equivalent tributary area, as specified in the Phase II Stormwater National Pollutant Discharge Elimination System (NPDES) Permit.

Bio-retention LID Facilities shall vary in size depending on the impervious areas for which they serve and shall be located adjacent to these areas. These facilities are designed in accordance with the Bioretention Facility Design

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Criteria beginning on Page 4-3 of the DGSTC, as well as Figures 4-1 and 4-2. Locations of LID facilities can be seen on the Drainage Map attached.

Storm drains shall be utilized throughout the project to direct stormwater from impervious areas, to the bioretention facilities at locations specified in the Stormwater Control Plan. These new pipes shall be sized adequately to handle post project flow rates. Self-retaining areas are designed in accordance with the criteria in "Areas draining to self-retaining areas" on page 4-2 of the DGSTC: a maximum ratio of two parts impervious to one part pervious area.

Running parallel to the access drive, grass-lined interceptor swales shall be utilized to convey and treat runoff from access drive. All swales shall be designed to handle runoff from the 100-year storm event.

**IV. DOCUMENTATION OF DRAINAGE DESIGN****IV.A. Descriptions of Each Drainage Management Area****IV.A.1. Table of Drainage Management Areas**

Table 2. Drainage Management Areas

| DMA Region | Surface Type       | Area(acres) |
|------------|--------------------|-------------|
| 1          | Asphalt            | 0.07        |
| 1A         | Permeable Pavers   | 0.06        |
| 2          | Rooftop            | 0.05        |
| 3          | Concrete           | 0.03        |
| 4          | Asphalt            | 0.05        |
| 4A         | Permeable Pavers   | 0.04        |
| 5          | Rooftop            | 0.05        |
| 5A         | Permeable Pavers   | 0.00        |
| 6          | Rooftop            | 0.07        |
| 7          | Landscaping        | 0.03        |
| 8          | Concrete           | 0.04        |
| 9          | Landscaping        | 0.02        |
| 10         | Sidewalk           | 0.01        |
| 11         | Landscaping        | 0.01        |
| 12         | Concrete/Rooftop   | 0.10        |
| 13         | Rooftop            | 0.06        |
| 14         | Concrete           | 0.02        |
| 15         | Landscaping        | 0.01        |
| 16         | Asphalt            | 0.06        |
| 16A        | Permeable Pavers   | 0.03        |
| 17         | Landscaping        | 0.04        |
| 18         | Rooftop            | 0.03        |
| 19         | Concrete/Asphalt   | 0.01        |
| 20         | Landscaping        | 0.01        |
| 21         | Asphalt/Rooftop    | 0.06        |
| 21A        | Permeable Pavement | 0.01        |



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| DMA Region | Surface Type     | Area(acres) |
|------------|------------------|-------------|
| 22         | Concrete/Rooftop | 0.09        |
| 22A        | Permeable Pavers | 0.02        |
| 23         | Pavers           | 0.01        |
| 23A        | Permeable Pavers | 0.00        |
| 24         | Landscaping      | 0.01        |
| 25         | Asphalt          | 0.03        |
| 25A        | Permeable Pavers | 0.01        |
| 26         | Asphalt          | 0.05        |
| 26A        | Permeable Pavers | 0.01        |
| 27         | Asphalt          | 0.33        |
| 27A        | Permeable Pavers | 0.07        |
| 28         | Asphalt          | 0.04        |
| 28A        | Permeable Pavers | 0.03        |
| 29         | Permeable Pavers | 0.02        |
| 30         | Asphalt          | 0.04        |
| 31         | Asphalt          | 0.03        |
| 32         | Landscaping      | 0.02        |
| 33         | Pavers           | 0.04        |
| 34         | Landscaping      | 0.02        |
| 35         | Permeable Pavers | 0.02        |
| 36         | Landscaping      | 0.02        |
| 37         | Asphalt          | 0.19        |

**IV.A.2. Drainage Management Area Descriptions**

**DMA 1**, totaling 3,018 square feet, is comprised of asphalt concrete surfacing. DMA 1 drains to Stormwater Control Measure LIDF 1.

**DMA 1A**, totaling 2,735 square feet, is comprised of permeable pavers. DMA 1A drains to Stormwater Control Measure LIDF 1.

**DMA 2**, totaling 2,166 square feet, is comprised of rooftop. DMA 2 drains to Stormwater Control Measure LIDF 1.

**DMA 3**, totaling 1,119 square feet, is comprised of permeable pavers. DMA 3 drains to Stormwater Control Measure LIDF 1.

**DMA 4**, totaling 2,205 square feet, is comprised of asphalt concrete parking. DMA 4 drains to Stormwater Control Measure LIDF 2.

**DMA 4A**, totaling 1,667 square feet, is comprised of asphalt concrete parking. DMA 4A drains to Stormwater Control Measure LIDF 2.

**DMA 5**, totaling 2,103 square feet, is comprised of rooftop. DMA 5 drains to Stormwater Control Measure LIDF 2.

**DMA 5A**, totaling 132 square feet, is comprised of permeable pavement. DMA 5A drains to Stormwater Control Measure LIDF 2.

**DMA 6**, totaling 2,917 square feet, is comprised of rooftop. DMA 6 drains to self-retaining area, DMA 7.

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**DMA 7**, totaling 1,462 square feet, is a self-retaining area comprised of native grasses and trees. Native flora in the receiving area provides infiltration and treatment opportunities.

**DMA 8**, totaling 1,563 square feet, is comprised of concrete sidewalk. DMA 8 drains to self-retaining area, DMA 9.

**DMA 9**, totaling 845 square feet, is a self-retaining area comprised of native grasses and trees. Native flora in the receiving area provides infiltration and treatment opportunities.

**DMA 10**, totaling 487 square feet, is comprised of permeable pavement. DMA 10 drains to self-retaining area, DMA 11.

**DMA 11**, totaling 253 square feet, is a self-retaining area comprised of native grasses and trees. Native flora in the receiving area provides infiltration and treatment opportunities.

**DMA 12**, totaling 4,321 square feet, is comprised of rooftop and concrete sidewalk. DMA 12 drains to Stormwater Control Measure LIDF 3.

**DMA 13**, totaling 2,671 square feet, is comprised of rooftop. DMA 13 drains to Stormwater Control Measure LIDF 4.

**DMA 14**, totaling 1,025 square feet, is comprised of concrete. DMA 14 drains to self-retaining area, DMA 15.

**DMA 15**, totaling 512 square feet, is a self-retaining area comprised of native grasses and trees. Native flora in the receiving area provides infiltration and treatment opportunities.

**DMA 16**, totaling 2,473 square feet, is comprised of asphalt. DMA 16 drains to self-retaining area, DMA 17.

**DMA 16A**, totaling 1,115 square feet, is comprised of permeable pavers. DMA 16A drains to self-retaining area, DMA 17.

**DMA 17**, totaling 1,805 square feet, is a self-retaining area comprised of native grasses and trees. Native flora in the receiving area provides infiltration and treatment opportunities.

**DMA 18**, totaling 1,198 square feet, is comprised of rooftop. DMA 18 drains to Stormwater Control Measure LIDF 5.

**DMA 19**, totaling 349 square feet, is comprised of asphalt. DMA 19 drains to self-retaining area, DMA 20.

**DMA 19A**, totaling 265 square feet, is comprised of permeable pavers. DMA 19A drains to self-retaining area, DMA 20.

**DMA 20**, totaling 349 square feet, is a self-retaining area comprised of native grasses and trees. Native flora in the receiving area provides infiltration and treatment opportunities.

**DMA 21**, totaling 2,667 square feet, is comprised of asphalt and rooftop. DMA 21 drains to Stormwater Control Measure LIDF 6.

**DMA 21A**, totaling 341 square feet, is comprised of permeable pavers. DMA 21A drains to Stormwater Control Measure LIDF 6.

**DMA 22**, totaling 4,112 square feet, is comprised of rooftop. DMA 22 drains to Stormwater Control Measure LIDF 7.

**DMA 22A**, totaling 774 square feet, is comprised of asphalt. DMA 22A drains to Stormwater Control Measure LIDF 7.

**DMA 23**, totaling 452 square feet, is comprised of asphalt. DMA 23 drains to self-retaining area, DMA 20.

**DMA 23A**, totaling 145 square feet, is comprised of permeable pavers. DMA 23A drains to self-retaining area, DMA 20.

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**DMA 24**, totaling 297 square feet, is a self-retaining area comprised of native grasses and trees. Native flora in the receiving area provides infiltration and treatment opportunities.

**DMA 25**, totaling 1,357 square feet, is comprised of asphalt and concrete sidewalk. DMA 25 drains to Stormwater Control Measure LIDF 8.

**DMA 25A**, totaling 393 square feet, is comprised of asphalt and concrete sidewalk. DMA 25A drains to Stormwater Control Measure LIDF 8.

**DMA 26**, totaling 2,221 square feet, is comprised of asphalt. DMA 26 drains to Stormwater Control Measure LIDF 9.

**DMA 26A**, totaling 406 square feet, is comprised of permeable pavers. DMA 26A drains to Stormwater Control Measure LIDF 9.

**DMA 27**, totaling 14,164 square feet, is comprised of asphalt. DMA 27 drains to Stormwater Control Measure LIDF 10.

**DMA 27A**, totaling 3,231 square feet, is comprised of asphalt. DMA 27A drains to Stormwater Control Measure LIDF 10.

**DMA 28**, totaling 1,876 square feet, is comprised of asphalt. DMA 28 drains to Stormwater Control Measure LIDF 11.

**DMA 28A**, totaling 1,175 square feet, is comprised of permeable pavement. DMA 28A drains to Stormwater Control Measure LIDF 11.

**DMA 29**, totaling 679 square feet, is comprised of permeable pavement. DMA 29 drains to Stormwater Control Measure LIDF 12.

**DMA 30**, totaling 1,903 square feet, is comprised of asphalt. DMA 30 drains to Stormwater Control Measure LIDF 12.

**DMA 31**, totaling 1,407 square feet, is comprised of asphalt. DMA 31 drains to self-retaining area, DMA 32.

**DMA 32**, totaling 714 square feet, is a self-retaining area comprised of native grasses and trees. Native flora in the receiving area provides infiltration and treatment opportunities.

**DMA 33**, totaling 1,906 square feet, is comprised of pavers. DMA 33 drains to self-retaining area, DMA 34.

**DMA 34**, totaling 891 square feet, is a self-retaining area comprised of native grasses and trees. Native flora in the receiving area provides infiltration and treatment opportunities.

**DMA 35**, totaling 891 square feet, is comprised of pavers. DMA 35 drains to self-retaining area, DMA 36.

**DMA 36**, totaling 983 square feet, is a self-retaining area comprised of native grasses and trees. Native flora in the receiving area provides infiltration and treatment opportunities.

**DMA 37**, totaling 8,311 square feet, is comprised of asphalt. DMA 37 drains to surrounding vineyard area, maintaining the existing drainage pattern at this location.

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 Tabulation and Sizing Calculations

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IV.A.3. Information Summary for Bioretention Facility Design

| Total Project Area: 2.95 acres           |                                                     |
|------------------------------------------|-----------------------------------------------------|
| <b>LIDF 1 Area:</b> 390 ft <sup>2</sup>  | <b>DMA 1, 1A, 2, 3 Area:</b> 9,041 ft <sup>2</sup>  |
| <b>LIDF 2 Area:</b> 259 ft <sup>2</sup>  | <b>DMA 4, 4A, 5, 5A Area:</b> 5,607 ft <sup>2</sup> |
| <b>LIDF 3 Area:</b> 173 ft <sup>2</sup>  | <b>DMA 12 Area:</b> 4,321 ft <sup>2</sup>           |
| <b>LIDF 4 Area:</b> 149 ft <sup>2</sup>  | <b>DMA 13 Area:</b> 2,671 ft <sup>2</sup>           |
| <b>LIDF 5 Area:</b> 54 ft <sup>2</sup>   | <b>DMA 18 Area:</b> 1,198 ft <sup>2</sup>           |
| <b>LIDF 6 Area:</b> 157 ft <sup>2</sup>  | <b>DMA 21, 21A Area:</b> 2,667 ft <sup>2</sup>      |
| <b>LIDF 7 Area:</b> 195 ft <sup>2</sup>  | <b>DMA 22, 22A Area:</b> 4,886 ft <sup>2</sup>      |
| <b>LIDF 8 Area:</b> 95 ft <sup>2</sup>   | <b>DMA 25, 25A Area:</b> 1,750 ft <sup>2</sup>      |
| <b>LIDF 9 Area:</b> 132 ft <sup>2</sup>  | <b>DMA 26, 26A Area:</b> 2,627 ft <sup>2</sup>      |
| <b>LIDF 10 Area:</b> 740 ft <sup>2</sup> | <b>DMA 27, 27A Area:</b> 17,395 ft <sup>2</sup>     |
| <b>LIDF 11 Area:</b> 119 ft <sup>2</sup> | <b>DMA 28, 28A Area:</b> 3,051 ft <sup>2</sup>      |
| <b>LIDF 12 Area:</b> 110 ft <sup>2</sup> | <b>DMA 29, 30 Area:</b> 2,582 ft <sup>2</sup>       |

IV.A.4. Self-Treating Areas

There are no self-treating areas on this project site.

IV.A.5. Self-Retaining Areas

Table 3. Self-Retaining Areas

| DMA Region | Area (square feet) |
|------------|--------------------|
| DMA 7      | 1,462              |
| DMA 9      | 845                |
| DMA 11     | 253                |
| DMA 15     | 512                |
| DMA 17     | 1,805              |
| DMA 20     | 349                |

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|        |     |
|--------|-----|
| DMA 24 | 297 |
| DMA 32 | 714 |
| DMA 34 | 891 |
| DMA 36 | 983 |

IV.A.6. Areas Draining to Self-Retaining Areas

Table 4. Areas Draining to Self-Retaining Areas

| <b>DMA Region</b> | <b>Area (square feet)</b> | <b>Post-project Surface Type</b> | <b>Runoff Factor</b> | <b>Receiving self-retaining DMA</b> | <b>Receiving self-retaining DMA Area (square feet)</b> |
|-------------------|---------------------------|----------------------------------|----------------------|-------------------------------------|--------------------------------------------------------|
| DMA 6             | 2,917                     | Rooftop                          | 1.0                  | DMA 7                               | 1,462                                                  |
| DMA 8             | 1,563                     | Concrete                         | 1.0                  | DMA 9                               | 845                                                    |
| DMA 10            | 487                       | Concrete                         | 1.0                  | DMA 11                              | 253                                                    |
| DMA 14            | 1,025                     | Concrete                         | 1.0                  | DMA 15                              | 512                                                    |
| DMA 16            | 2,473                     | Asphalt                          | 1.0                  | DMA 17                              | 1,805                                                  |
| DMA 16A           | 1,115                     | Permeable Pavers                 | 0.0                  | DMA 17                              | 1,805                                                  |
| DMA 19            | 349                       | Asphalt                          | 1.0                  | DMA 20                              | 349                                                    |
| DMA 19A           | 265                       | Permeable Pavers                 | 0.0                  | DMA 20                              | 349                                                    |
| DMA 23            | 452                       | Pavers                           | 1.0                  | DMA 24                              | 297                                                    |
| DMA 23A           | 145                       | Permeable Pavers                 | 0.0                  | DMA 24                              | 297                                                    |
| DMA 31            | 1,407                     | Asphalt                          | 1.0                  | DMA 32                              | 714                                                    |
| DMA 33            | 1,906                     | Pavers                           | 1.0                  | DMA 34                              | 891                                                    |
| DMA 35            | 891                       | Permeable Pavers                 | 0.0                  | DMA 36                              | 983                                                    |

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**IV.A.7. Areas Draining to Bio-retention Facilities**

Table 5. LID Facility 1

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| DMA Region   | DMA Area (ft <sup>2</sup> ) | Post-project surface type | DMA Runoff factor | DMA Area × runoff factor (ft <sup>2</sup> ) | Facility Name: LIDF 1 |                                     |                                      |
|--------------|-----------------------------|---------------------------|-------------------|---------------------------------------------|-----------------------|-------------------------------------|--------------------------------------|
|              |                             |                           |                   |                                             |                       |                                     |                                      |
| 1            | 3,018                       | Asphalt                   | 1.0               | 3,018                                       | SCM Sizing factor     | Minimum SCM Size (ft <sup>2</sup> ) | Proposed SCM Size (ft <sup>2</sup> ) |
| 1A           | 2,735                       | Permeable pavers          | 0.0               | 0                                           |                       |                                     |                                      |
| 2            | 2,166                       | Rooftop                   | 1.0               | 2,166                                       |                       |                                     |                                      |
| 3            | 1,119                       | Concrete                  | 1.0               | 1,119                                       |                       |                                     |                                      |
| <b>Total</b> |                             |                           |                   | 6,303                                       | 0.04                  | 252                                 | 390                                  |

Table 6. LID Facility 2

| DMA Region   | DMA Area (ft <sup>2</sup> ) | Post-project surface type | DMA Runoff factor | DMA Area × runoff factor (ft <sup>2</sup> ) | Facility Name: LIDF 2 |                                     |                                      |
|--------------|-----------------------------|---------------------------|-------------------|---------------------------------------------|-----------------------|-------------------------------------|--------------------------------------|
|              |                             |                           |                   |                                             |                       |                                     |                                      |
| 4            | 2,205                       | Asphalt                   | 1.0               | 2,205                                       | SCM Sizing factor     | Minimum SCM Size (ft <sup>2</sup> ) | Proposed SCM Size (ft <sup>2</sup> ) |
| 4A           | 1,667                       | Permeable Pavers          | 0.0               | 0                                           |                       |                                     |                                      |
| 5            | 2,103                       | Rooftop                   | 1.0               | 2,103                                       |                       |                                     |                                      |
| 5A           | 132                         | Permeable Pavers          | 0.0               | 0                                           |                       |                                     |                                      |
| <b>Total</b> |                             |                           |                   | 4,308                                       | 0.04                  | 172                                 | 259                                  |

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Table 7. LID Facility 3

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| DMA Region   | DMA Area (ft <sup>2</sup> ) | Post-project surface type | DMA Runoff factor | DMA Area × runoff factor (ft <sup>2</sup> ) | Facility Name: LIDF 3 |                                     |                                      |
|--------------|-----------------------------|---------------------------|-------------------|---------------------------------------------|-----------------------|-------------------------------------|--------------------------------------|
|              |                             |                           |                   |                                             | SCM Sizing factor     | Minimum SCM Size (ft <sup>2</sup> ) | Proposed SCM Size (ft <sup>2</sup> ) |
| 12           | 4,321                       | Rooftop/Concrete          | 1.0               | 4,321                                       |                       |                                     |                                      |
|              |                             |                           |                   |                                             |                       |                                     |                                      |
| <b>Total</b> |                             |                           |                   | 4,321                                       | 0.04                  | 173                                 | 173                                  |

Table 8. LID Facility 4

| DMA Region   | DMA Area (ft <sup>2</sup> ) | Post-project surface type | DMA Runoff factor | DMA Area × runoff factor (ft <sup>2</sup> ) | Facility Name: LIDF 4 |                                     |                                      |
|--------------|-----------------------------|---------------------------|-------------------|---------------------------------------------|-----------------------|-------------------------------------|--------------------------------------|
|              |                             |                           |                   |                                             | SCM Sizing factor     | Minimum SCM Size (ft <sup>2</sup> ) | Proposed SCM Size (ft <sup>2</sup> ) |
| 13           | 2,671                       | Rooftop                   | 1.0               | 2,671                                       |                       |                                     |                                      |
|              |                             |                           |                   |                                             |                       |                                     |                                      |
| <b>Total</b> |                             |                           |                   | 2,671                                       | 0.04                  | 107                                 | 149                                  |

Table 9. LID Facility 5

| DMA Region   | DMA Area (ft <sup>2</sup> ) | Post-project surface type | DMA Runoff factor | DMA Area × runoff factor (ft <sup>2</sup> ) | Facility Name: LIDF 5 |                                     |                                      |
|--------------|-----------------------------|---------------------------|-------------------|---------------------------------------------|-----------------------|-------------------------------------|--------------------------------------|
|              |                             |                           |                   |                                             | SCM Sizing factor     | Minimum SCM Size (ft <sup>2</sup> ) | Proposed SCM Size (ft <sup>2</sup> ) |
| 18           | 1,198                       | Rooftop                   | 1.0               | 1,198                                       |                       |                                     |                                      |
|              |                             |                           |                   |                                             |                       |                                     |                                      |
| <b>Total</b> |                             |                           |                   | 1,198                                       | 0.04                  | 48                                  | 54                                   |



## CIA VINEYARD LODGE USE PERMIT

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Table 10. LID Facility 6

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Stormwater Control Plan

| DMA Region   | DMA Area (ft <sup>2</sup> ) | Post-project surface type | DMA Runoff factor | DMA Area × runoff factor (ft <sup>2</sup> ) | Facility Name: LIDF 6 |                                     |                                      |
|--------------|-----------------------------|---------------------------|-------------------|---------------------------------------------|-----------------------|-------------------------------------|--------------------------------------|
|              |                             |                           |                   |                                             |                       |                                     |                                      |
| 21           | 2,667                       | Asphalt/ Rooftop          | 1.0               | 2,667                                       | SCM Sizing factor     | Minimum SCM Size (ft <sup>2</sup> ) | Proposed SCM Size (ft <sup>2</sup> ) |
| 21A          | 341                         | Permeable Pavers          | 0.0               | 0                                           |                       |                                     |                                      |
| <b>Total</b> |                             |                           |                   | 2,667                                       | 0.04                  | 107                                 | 157                                  |

Table 11. LID Facility 7

| DMA Region   | DMA Area (ft <sup>2</sup> ) | Post-project surface type | DMA Runoff factor | DMA Area × runoff factor (ft <sup>2</sup> ) | Facility Name: LIDF 7 |                                     |                                      |
|--------------|-----------------------------|---------------------------|-------------------|---------------------------------------------|-----------------------|-------------------------------------|--------------------------------------|
|              |                             |                           |                   |                                             |                       |                                     |                                      |
| 22           | 4,112                       | Rooftop                   | 1.0               | 4,112                                       | SCM Sizing factor     | Minimum SCM Size (ft <sup>2</sup> ) | Proposed SCM Size (ft <sup>2</sup> ) |
| 22A          | 774                         | Permeable Pavers          | 0.0               | 0                                           |                       |                                     |                                      |
| <b>Total</b> |                             |                           |                   | 4,112                                       | 0.04                  | 165                                 | 195                                  |

Table 12. LID Facility 8

| DMA Region   | DMA Area (ft <sup>2</sup> ) | Post-project surface type | DMA Runoff factor | DMA Area × runoff factor (ft <sup>2</sup> ) | Facility Name: LIDF 8 |                                     |                                      |
|--------------|-----------------------------|---------------------------|-------------------|---------------------------------------------|-----------------------|-------------------------------------|--------------------------------------|
|              |                             |                           |                   |                                             |                       |                                     |                                      |
| 25           | 1,357                       | Asphalt                   | 1.0               | 1,357                                       | SCM Sizing factor     | Minimum SCM Size (ft <sup>2</sup> ) | Proposed SCM Size (ft <sup>2</sup> ) |
| 25A          | 393                         | Permeable Pavers          | 0.0               | 0                                           |                       |                                     |                                      |
| <b>Total</b> |                             |                           |                   | 1,357                                       | 0.04                  | 54                                  | 95                                   |

## CIA VINEYARD LODGE USE PERMIT

Project No. 2016040

August 18, 2016

## SUMMIT ENGINEERING, INC.

Stormwater Control Plan

Table 13. LID Facility 9

| DMA Region   | DMA Area (ft <sup>2</sup> ) | Post-project surface type | DMA Runoff factor | DMA Area × runoff factor (ft <sup>2</sup> ) | Facility Name: LIDF 9 |                                     |                                      |
|--------------|-----------------------------|---------------------------|-------------------|---------------------------------------------|-----------------------|-------------------------------------|--------------------------------------|
|              |                             |                           |                   |                                             | SCM Sizing factor     | Minimum SCM Size (ft <sup>2</sup> ) | Proposed SCM Size (ft <sup>2</sup> ) |
| 26           | 2,221                       | Asphalt                   | 1.0               | 2,221                                       | 0.04                  | 89                                  | 132                                  |
| 26A          | 406                         | Permeable Pavers          | 0.0               | 0                                           |                       |                                     |                                      |
| <b>Total</b> |                             |                           |                   | 2,221                                       | 0.04                  | 89                                  | 132                                  |

Table 14. LID Facility 10

| DMA Region   | DMA Area (ft <sup>2</sup> ) | Post-project surface type | DMA Runoff factor | DMA Area × runoff factor (ft <sup>2</sup> ) | Facility Name: LIDF 10 |                                     |                                      |
|--------------|-----------------------------|---------------------------|-------------------|---------------------------------------------|------------------------|-------------------------------------|--------------------------------------|
|              |                             |                           |                   |                                             | SCM Sizing factor      | Minimum SCM Size (ft <sup>2</sup> ) | Proposed SCM Size (ft <sup>2</sup> ) |
| 27           | 14,164                      | Asphalt                   | 1.0               | 14,164                                      | 0.04                   | 567                                 | 740                                  |
| 27A          | 3,231                       | Permeable Pavers          | 0.0               | 0                                           |                        |                                     |                                      |
| <b>Total</b> |                             |                           |                   | 14,164                                      | 0.04                   | 567                                 | 740                                  |

Table 15. LID Facility 11

| DMA Region   | DMA Area (ft <sup>2</sup> ) | Post-project surface type | DMA Runoff factor | DMA Area × runoff factor (ft <sup>2</sup> ) | Facility Name: LIDF 11 |                                     |                                      |
|--------------|-----------------------------|---------------------------|-------------------|---------------------------------------------|------------------------|-------------------------------------|--------------------------------------|
|              |                             |                           |                   |                                             | SCM Sizing factor      | Minimum SCM Size (ft <sup>2</sup> ) | Proposed SCM Size (ft <sup>2</sup> ) |
| 28           | 1,876                       | Asphalt                   | 1.0               | 1,876                                       | 0.04                   | 75                                  | 119                                  |
| 28A          | 1,175                       | Permeable Pavers          | 0.0               | 0                                           |                        |                                     |                                      |
| <b>Total</b> |                             |                           |                   | 1,876                                       | 0.04                   | 75                                  | 119                                  |

**CIA VINEYARD LODGE USE PERMIT**  
 Project No. 2016040  
 August 18, 2016

**SUMMIT ENGINEERING, INC.**  
 Stormwater Control Plan

Table 16. LID Facility 12

| DMA Region   | DMA Area (ft <sup>2</sup> ) | Post-project surface type | DMA Runoff factor | DMA Area × runoff factor (ft <sup>2</sup> ) | Facility Name: LIDF 12 |                                     |                                      |
|--------------|-----------------------------|---------------------------|-------------------|---------------------------------------------|------------------------|-------------------------------------|--------------------------------------|
|              |                             |                           |                   |                                             | SCM Sizing factor      | Minimum SCM Size (ft <sup>2</sup> ) | Proposed SCM Size (ft <sup>2</sup> ) |
| 29           | 679                         | Permeable Pavers          | 0.0               | 0                                           |                        |                                     |                                      |
| 30           | 1,903                       | Asphalt                   | 1.0               | 1,903                                       |                        |                                     |                                      |
| <b>Total</b> |                             |                           |                   | 1,903                                       | 0.04                   | 76                                  | 110                                  |

## V. SOURCE CONTROL MEASURES

### V.A. Site activities and potential sources of pollutants

- On-site Storm Drain Inlets
- Parking Areas
- Landscape Maintenance

### V.B. Summary of Maintenance Requirements for Each Stormwater Facility

- Access drive shall be designed according to the latest version of the City of St. Helena Road and Street Standards.
- Parking areas shall be designed to minimize impervious surface areas and graded to direct runoff to nearby Treatment Control BMPs to treat and remove oil and petroleum hydrocarbons.
- Energy dissipaters constructed of rip rap shall be specified at the outlets of new and reconstructed storm drains and swales to minimize erosion.
- Grass lined swales shall be incorporated into the design to treat runoff and minimize erosion.
- Existing trees, shrubs and groundcover shall be preserved where feasible.
- Plant species tolerant of saturated soil conditions shall be specified in landscaped areas to be utilized for stormwater infiltration and treatment.
- Trash storage areas shall be paved and stormwater from adjacent areas shall not be directed to the storage area. Containers shall have lids.
- All roofs, gutters, and downspouts made of unprotected metals shall discharge to landscaped areas designed to infiltrate and detain stormwater runoff.

**CIA VINEYARD LODGE USE PERMIT**

Project No. 2016040

August 18, 2016

Table 17. Source Control Table

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Stormwater Control Plan

| Potential source of runoff pollutants        | Permanent source control BMPs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Operational source control BMPs                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| On-site Storm Drain Inlets                   | Mark all inlets with the words "No Dumping! Flows to Creek" or similar.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <ul style="list-style-type: none"> <li>- Maintain and periodically replace inlet markings.</li> <li>- Provide stormwater pollution prevention information to new site owners, lessees, or operators.</li> <li>- See applicable operational BMPs in Fact Sheet SC-44, "Drainage System Maintenance"</li> </ul>                            |
| Landscaping/Pesticide Use/Ground Maintenance | <p>State that final landscaping will accomplish all the following:</p> <ul style="list-style-type: none"> <li>- Preserve existing native trees, shrubs, and ground cover to maximum extent possible</li> <li>- Design landscaping to minimize irrigation and runoff, to promote surface infiltration where appropriate, and to minimize the use of fertilizers and pesticides that can contribute to stormwater pollution.</li> <li>- Where landscaped areas are used to retain or detain stormwater, specify plants that are tolerant of saturated soil conditions.</li> <li>- Consider using pest-resistant plants, especially adjacent to hardscape.</li> </ul> <p>To insure successful establishment, select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.</p> | <ul style="list-style-type: none"> <li>- Maintain landscaping using minimum or no pesticides</li> <li>- See applicable operational BMPs in Fact Sheet SC-41, "building and Grounds Maintenance," in the CASQA Stormwater Quality Handbooks</li> <li>- Provide IPM information to new owners, lessees, and operators</li> </ul>           |
| Parking Areas                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <ul style="list-style-type: none"> <li>- Sweep parking lots regularly to prevent accumulation of litter and debris. Collect debris from pressure washing to prevent entry into the storm drain system. Collect washwater containing any cleaning agent or degreaser and discharge to the sanitary sewer not to a storm drain.</li> </ul> |

**CIA VINEYARD LODGE USE PERMIT**

Project No. 2016040

August 18, 2016

**SUMMIT ENGINEERING, INC.**

Stormwater Control Plan

**V.C. Features, Materials, and Methods of Construction of Source Control BMPs**

All Source Control BMPs listed in the previous section will be implemented with corresponding and appropriate features, materials, and methods of construction.

**VI. STORMWATER FACILITY MAINTENANCE****VI.A. Ownership and Responsibility for Maintenance in Perpetuity**

The applicant accepts responsibility for interim operation and maintenance of stormwater treatment and flow-control facilities until such time as this responsibility is formally transferred to a subsequent owner. The owner then accepts full responsibility for the proper operation and maintenance of all stormwater facilities.

**VI.B. Summary of Maintenance Requirements for Each Stormwater Facility**

Any maintenance of all bio-retention facilities will be financed and implemented by the owner of the CIA Vineyard Lodge project. All facilities shall be inspected annually and documented. Any necessary repairs to facilities shall also be documented. Updated information, including contact information, must be provided to the municipality if property is sold and whenever designated individuals or contractors change.

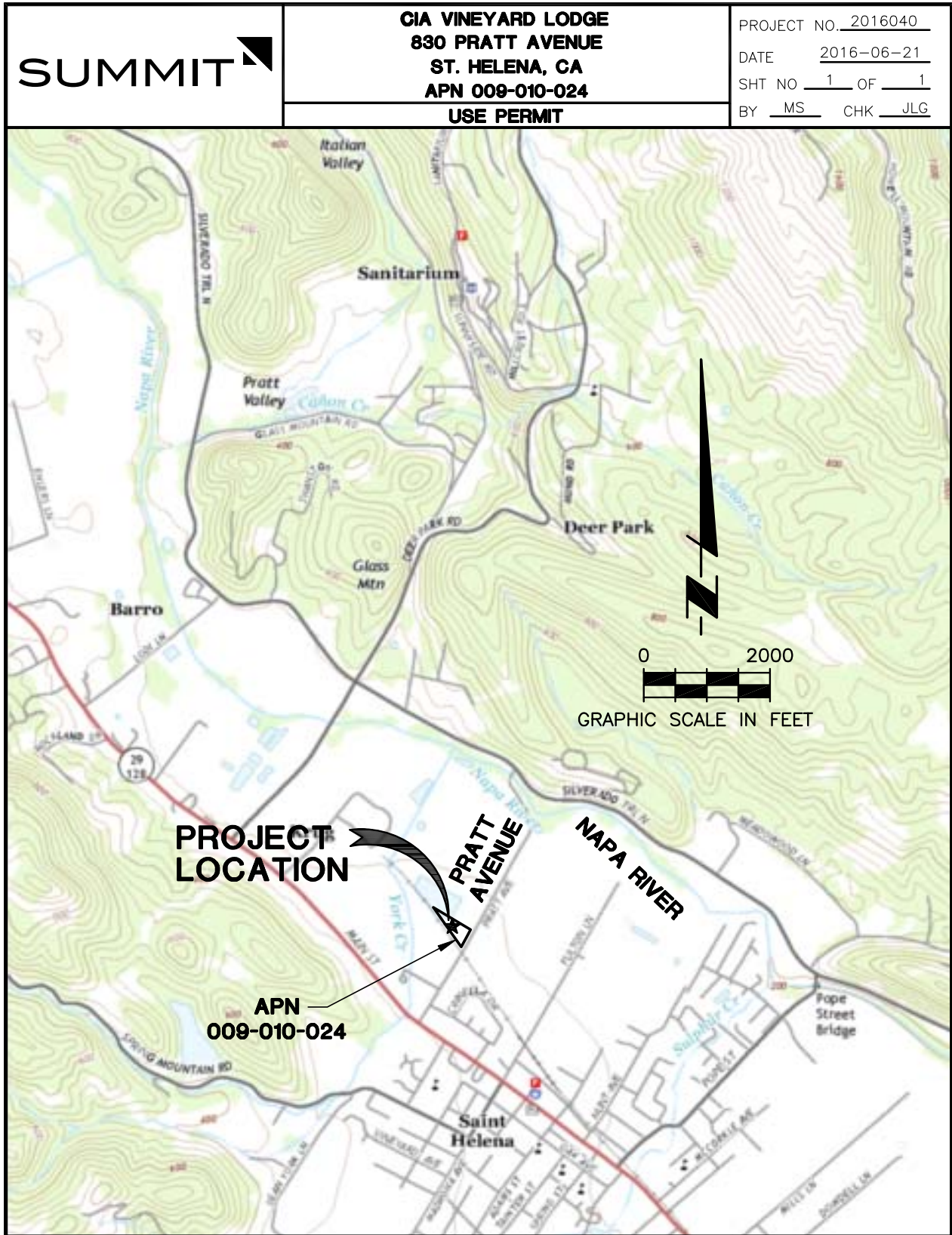
**VII. CONSTRUCTION CHECKLIST**

Table 18. Construction Checklist

| <b>Stormwater<br/>Control Plan<br/>Page #</b> | <b>Source Control or Treatment Control Measure</b> | <b>See Plan Sheet #s</b> |
|-----------------------------------------------|----------------------------------------------------|--------------------------|
| 9                                             | LIDF 1, 2                                          | H1                       |
| 10                                            | LIDF 3, 4, 5                                       | H1                       |
| 11                                            | LIDF 6, 7, 8                                       | H1                       |
| 12                                            | LIDF 9, 10, 11                                     | H1                       |
| 13                                            | LIDF 12                                            | H1                       |

**VIII. CERTIFICATIONS**

The preliminary design of stormwater treatment facilities and other stormwater pollution control measures in this plan are in accordance with the current edition of the BASMAA *Post-Construction Manual*.



PLOTTED ON: 6/17/2016 3:04 PM

P:\2016\2016040 CIA VINEYARD LODGE USE PERMIT ASSISTANCE\CAD\CIVIL\USE PERMIT\16040--VICINITY MAP.DWG

Summit Engineering, Inc  
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APPROXIMATE  
PROPERTY  
LINE, TYP

PARKING  
[50 SPACES]

(E) PARKING

APN 010-010-026

ENTRANCE FROM  
VINEYARD ROAD

LIDF #12

LIDF #10

LIDF #11

LIDF #5

VINEYARD ROAD

(E) RAILROAD

LIDF #9

VALLEY GUTTER

RAILROAD  
ROW, TYP

(E) VINEYARD LODGE 2  
BUILDING TO REMAIN

APN 010-010-026

(E) BIOSWALE

TRASH ENCLOSURE

PARKING  
[2 ACCESSIBLE  
SPACES, 18  
SPACES TOTAL]

EXIT TO PRATT  
AVENUE

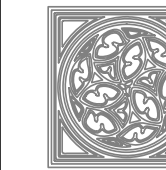
PRATT AVENUE

DORMITORY  
BUILDING,  
TYP OF 4

LIDF #4

LIDF  
#3

REVISIONS



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PERMIT SUBMITTAL 2016-09-02

| NO.       | DESCRIPTION | DATE |
|-----------|-------------|------|
| REVISIONS |             |      |

THE CULINARY  
INSTITUTE OF  
AMERICA

830 PRATT AVENUE  
ST. HELENA, CA 94574

SHEET TITLE

STORMWATER  
CONTROL PLAN AND  
DRAINAGE MAP

ISSUANCE  
DESIGN DEVELOPMENT

09/02/16

PROJ. NO.  
2016096

DRAWN  
TF

CHECKED  
MS

**PRELIMINARY**  
**NOT FOR CONSTRUCTION**

DRAWING NO.

**H1**

0 30 60  
GRAPHIC SCALE IN FEET

LEGEND

|                       |                       |
|-----------------------|-----------------------|
| DRAINAGE AREA         | Blue line             |
| DRAINAGE SWALE        | Black line with arrow |
| STORM DRAIN           | Pink line with arrow  |
| SELF-RETAINING AREA   | Grid pattern          |
| BIORETENTION FACILITY | Dotted pattern        |
| PERMEABLE PAVEMENT    | Diagonal lines        |





**TRAFFIC IMPACT REPORT  
CULINARY INSTITUTE OF AMERICA  
GREYSTONE MASTER PLAN**

**November 17, 2016**

**Prepared for: Culinary Institute of America**

**Prepared by: CRANE TRANSPORTATION GROUP  
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# CRANE TRANSPORTATION GROUP CULINARY INSTITUTE OF AMERICA – GREYSTONE MASTER PLAN PROJECT TRAFFIC AND PARKING EVALUATION

## I. INTRODUCTION

This report has been prepared at the request of the Culinary Institute of America (CIA) to detail the traffic and parking impacts resulting from their proposed Master Plan project at Greystone in St. Helena. It is analyzed in the context of the entire CIA Master Plan, involving changes to the Greystone and Vineyard Lodge facilities in St. Helena, and the move to Napa of some of the existing activities at Greystone. At the request of the City of St. Helena, the traffic and parking impacts of the Master Plan at the Vineyard Lodge facility are addressed in a separate traffic study, closely coordinated with this analysis.

May 2016 full-day (6:00 AM to 6:00 PM) Thursday and Saturday traffic counts and parking surveys were conducted at the CIA Greystone campus, concurrent with full-day Thursday traffic and parking counts at Vineyard Lodge. May 2016 weekday activity levels at the CIA-Greystone facility were found to exceed Saturday levels, thus, the following analysis focuses on weekday traffic at the CIA driveway/State Route (S.R.) 29 intersection and at the Pratt Avenue/S.R. 29-128 intersection. Peak hour traffic counts were conducted by Crane Transportation Group at the Pratt Avenue/S.R. 29-128 intersection on Thursday, May 12, from 7:00 – 9:00 AM and from 4:00 - 6:00 PM. The peak hours of total traffic passing through the intersection were determined to be 7:45 to 8:45 AM and 4:00 to 5:00 PM on Thursday. Volumes have been seasonally adjusted consistent with Caltrans' PeMS (Performance Measurement System) peak season data for S.R. 29-128 to represent peak season conditions.

The proposed CIA Master Plan is projected for completion and full operation in year 2018. The plan includes:

- expansion of the Associate in Occupational Studies in Culinary Arts (AOS) degree program at Greystone from 200 to 300 students and provision of expanded student housing at Vineyard Lodge, and
- relocation of many existing activities from Greystone to the former Copia site in the City of Napa.

Initially, the expected growth in existing (non-project) traffic along S.R.29-128 (Main Street) was projected to develop year 2018 peak season traffic conditions. 2035 traffic volume conditions were provided by the engineers developing the on-going St Helena General Plan Traffic Update.<sup>1</sup> Trip generation and distribution projections were developed for the expected overall decrease in traffic due to the CIA-Greystone Master Plan, with “plus-project” operating conditions determined at the CIA driveway/S.R. 29-128 (Main Street) intersection and Pratt Avenue/Las Alcobas Hotel driveway/S.R. 29-128 (Main Street) intersection. Evaluation included the adequacy of the left turn lane on the northbound S.R. 29-128 (Main Street) intersection approach to the CIA driveway to accommodate peak hour (non-special event)

<sup>1</sup> Currently under preparation by Omni-Means Traffic Engineering.

<sup>2</sup> January 6, 2015.

<sup>3</sup> The Las Alcobas Hotel will have 68 rooms, a spa for guests only, a 40-seat quality restaurant



demand. Post-project, hourly parking demand matrices were developed for weekday and Saturday peak season conditions at Greystone to determine the adequacy of the proposed parking to be provided as part of the Master Plan project. At the City's request, weekday hourly CIA-Greystone trip generation, projected to peak education and tourist activity at the CIA-Greystone facility (summer/fall 2016), was developed. The hourly inbound and outbound activity for a peak season weekday in 2016 is shown in the tables in this study.

## II. SUMMARY OF FINDINGS

1. Drivers exiting the Culinary Institute of America at Greystone now experience delays for turn movements to S.R. 29-128 during peak traffic periods. The average delay for left and right turns combined out of the CIA driveway ranges from 20 to 27 seconds with left turns taking significantly longer than right turns. The narrow width of the CIA driveway precludes a right turning vehicle from being able to pull around a vehicle waiting to make a left turn. During a Thursday afternoon peak traffic hour, 40 percent of all outbound vehicles make a left turn. Left turn movements from northbound State Route 29-128 into the CIA driveway are delayed, on average, 10 seconds during peak traffic periods.
2. The CIA parking demand on a typical weekday (with classes in session but no special events) currently does not exceed the supply of striped on-site parking spaces available to the public. The total supply of on-site parking is 265 parking spaces located primarily in two major parking lots adjacent the historic Greystone building; there is on-site parking for employees and the general public, as well as restaurant valet parking, a loading and unloading area, and spaces for service vehicles. Handicapped-accessible spaces are provided near the Greystone entrance. Peak parking demand on weekdays occurs from late morning until 4:00 PM. On a typical Saturday (with no classes in session or special events), the demand for on-site parking was found to be substantially less than on a typical weekday.
3. With Existing (without project) volumes, the CIA driveway/S.R.29-128 intersection would experience LOS C operation on the CIA driveway approach to the state highway during a weekday AM peak hour, with 20.6 seconds average delay for eastbound CIA driveway turns, and LOS D operation during the PM peak hour, with 29.3 seconds average delay for eastbound CIA driveway turns. The average delay for left turns from northbound S.R.29-128 into the CIA campus would be less than 10 seconds during both the AM and PM peak hours.

During the peak traffic hour on a summer/fall 2016 weekday, with 2016 (without project) volumes, the Pratt Avenue/S.R. 29-128 intersection would experience AM peak hour LOS D operation, with 30.3 seconds average delay for turns from westbound Pratt Avenue, and PM peak hour LOS E operation, with 39.3 seconds average delay for turns from westbound Pratt Avenue.

4. With 2018 (without project) volumes, the CIA driveway/S.R.29-128 intersection would experience LOS C operation on the CIA driveway approach to the state highway during a weekday AM peak hour, with 21.8 seconds average delay for eastbound CIA driveway turns, and LOS D operation during the PM peak hour, with 32.0 seconds average delay for eastbound CIA driveway turns. The average delay for left turns from northbound

S.R.29-128 into the CIA campus would be less than 10 seconds during both the AM and PM peak hours.

During the peak traffic hour on a summer/fall 2018 weekday, with 2018 (without project) volumes, the Pratt Avenue/Las Alcobas Hotel Driveway/S.R. 29-128 intersection would experience AM peak hour LOS E operation, with 35.9 seconds average delay for turns from the eastbound Las Alcobas Hotel Driveway, and LOS F operation, with 64.0 seconds average delay for turns from westbound Pratt Avenue. PM peak hour would experience LOS E operation, with 36.4 seconds average delay for turns from the eastbound Las Alcobas Hotel Driveway, and LOS F operation, with 93.4 seconds average delay for turns from westbound Pratt Avenue.

5. With 2035 (without project) volumes, the CIA driveway/S.R.29-128 intersection would experience LOS E operation on the CIA driveway approach to the state highway during a weekday AM peak hour, with 37.4 seconds average delay for eastbound CIA driveway turns, and LOS F operation during the PM peak hour, with 82.7 seconds average delay for eastbound CIA driveway turns. The average delay for left turns from northbound S.R.29-128 into the CIA campus would be less than 11 seconds during both the AM and PM peak hours.

During the peak traffic hour on a summer/fall 2035 weekday, with 2035 (without project) volumes, the Pratt Avenue/Las Alcobas Hotel Driveway/S.R. 29-128 intersection would experience AM peak hour LOS F operation, with 87.1 seconds average delay for turns from the eastbound Las Alcobas Hotel Driveway, and LOS F operation, with extreme delay (over 120 seconds average delay) for turns from westbound Pratt Avenue. PM peak hour would experience LOS F operation, with 92.1 seconds average delay for turns from the eastbound Las Alcobas Hotel Driveway, and LOS F operation, with extreme delay (over 120 seconds average delay) for turns from westbound Pratt Avenue.

6. Volumes at the Pratt Avenue/ SR 29-128 intersection would not meet the 8-hour urban warrant, or urban peak hour warrant #3 criteria for signalization during either of the weekday peak traffic hours for 2018 or 2035 without Master Plan project conditions, however, by 2035, volumes approach meeting both signal warrants #1 and #3 criteria. Please see the warrant tables and charts in the **Appendix. Table 3** provides results for signalized operation, with LOS A, B or C for all conditions. Warrant, #7, the signal warrant pertaining to accident data, is not met for the five years of reported crash data at the intersection. A round is not considered feasible at this intersection due to space constraints, as detailed in a memorandum prepared by Summit Engineering (10/21/16) showing the layout of a 150-foot round diameter overlay of the intersection. The memorandum is included in the appendix to this study.
7. The civil engineer for the Las Alcobas Hotel, Riechers Spence Associates, prepared a design<sup>2</sup> for the Pratt Avenue/ Las Alcobas Hotel Driveway/SR 29-128 intersection northbound left turn lane with a length of 150 feet. This length would be more than adequate to accommodate the projected maximum storage demand.

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<sup>2</sup> January 6, 2015.

8. The proposed CIA Master Plan would reduce two-way trips by at least 15 trips to and from S.R.29-128 during a Thursday AM peak hour and by at least 21 trips to and from S.R. 29-128 during a Thursday PM peak hour(see Greystone Trip Generation in Appendix Tables A and B showing a decrease of 21 inbound and 3 outbound during the AM peak hour, and 10 inbound and 25 outbound during the PM peak hour). There would be an increase in trips to and from the Vineyard Lodge (3 inbound trips and 5 outbound AM peak hour trips, and 7 inbound and 5 outbound PM peak hour trips) attributable to students with parking permits traveling to and from downtown St. Helena and the surrounding area.
9. There would be a net decrease in traffic volumes at intersections due to the Master Plan project. With Existing (with project) volumes, the CIA driveway/S.R.29-128 intersection would experience LOS C operation on the CIA driveway approach to the state highway during a weekday AM peak hour, with 19.8 seconds average delay for eastbound CIA driveway turns (a reduction in average delay of 0.8 second), and LOS D operation during the PM peak hour, with 25.2 seconds average delay for eastbound CIA driveway turns (a reduction of 4.1 seconds). The average delay for left turns from northbound S.R.29-128 into the CIA campus would also be slightly reduced, and would remain less than 10 seconds during both the AM and PM peak hours.

With Existing volumes plus the Master Plan project, the Pratt Avenue/Las Alcobas Hotel Driveway/S.R. 29-128 intersection would experience LOS D operation, with 30.5 seconds average delay during the AM peak hour (an increase in average delay of 0.2 second), and LOS E operation, with 39.6 seconds average delay during the PM peak hour for turns on the Las Alcobas Hotel Driveway approach (an increase in average delay of 0.3 second). The project increment of 4 outbound trips from Vineyard Lodge would add 6 percent additional traffic to the westbound intersection approach during the existing AM and PM peak hours, adding to the existing extreme delays.

10. With 2018 (with Master Plan project) volumes, the CIA driveway/S.R.29-128 intersection would experience less average delay by 0.9 seconds (AM) and 4.8 seconds (PM) on the CIA driveway approach to the state highway the weekday AM and PM peak hours, respectively. The average delay for left turns from northbound S.R.29-128 into the CIA campus would be less than 10 seconds during both the AM and PM peak hours.

During the peak traffic hour on a summer/fall weekday morning and afternoon, with 2018 (with Master Plan project) volumes, the Pratt Avenue/Las Alcobas Hotel Driveway/S.R. 29-128 intersection would experience LOS E operation, with 35.1seconds average delay during the AM peak hour (a decrease in average delay of 0.8 second), and LOS E operation, with 35.4 seconds average delay during the PM peak hour for turns on the Las Alcobas Hotel Driveway approach (a decrease in average delay of 1.0 second). The westbound Pratt Avenue turns would experience extreme delays (LOS F) without the Master Plan project during the AM and PM peak hours;the project increment of 4 outbound trips from Vineyard Lodge would add 6 percent additional traffic to the westbound intersection approach during the existing AM and PM peak hours, resulting in an increased delay of 0.9 seconds (AM) and 1.0 second (PM).

11. With 2035 (with Master Plan) volumes, the CIA driveway/S.R.29-128 intersection would experience less average delay by 2.5 seconds (AM) and 24.9 seconds (PM) on the CIA driveway approach to the state highway during the weekday peak hours. The average delay for left turns from northbound S.R.29-128 into the CIA campus would be less than 11 seconds during both the AM and PM peak hours.

With 2035 (with Master Plan project) volumes, the Pratt Avenue/Las Alcobas Hotel Driveway/S.R. 29-128 intersection would experience LOS F operation, with 83.6 seconds average delay during the AM peak hour (a decrease in average delay of 3.5 seconds), and 88.3 seconds average delay during the PM peak hour for turns on the Las Alcobas Hotel Driveway approach (a decrease in average delay of 3.8 seconds). The westbound Pratt Avenue turns would experience extreme delays without the Master Plan project during the AM and PM peak hours; the project increment of 4 westbound trips represents 5 percent traffic added to the westbound intersection approach during the AM and PM peak hours, adding to the existing extreme delays.

12. Volumes at the Pratt Avenue/ SR 29-128 intersection would not meet the 8-hour urban warrant, or urban peak hour warrant #3 criteria for signalization during either of the weekday peak traffic hours for 2018 or 2035 without Master Plan conditions, however, by 2035, volumes approach meeting both signal warrants #1 and #3 criteria. Please see the warrant tables and charts in the **Appendix. Table 3** provides results for signalized operation, with LOS A, B or C for all conditions. Warrant, #7, the signal warrant pertaining to accident data, is not met for the five years of reported crash data at the intersection. A round is not considered feasible at this intersection due to space constraints, as detailed in a memorandum prepared by Summit Engineering (10/21/16) showing the layout of a 150-foot round diameter overlay of the intersection. The memorandum is included in the appendix to this study..
13. The maximum year 2035 + Master Plan (non-special event) queue that would be expected in the left turn lane on the northbound S.R.29-128 approach to the CIA driveway would be 3 vehicles during a Thursday PM peak hour. The left turn lane's 150-foot length can accommodate 6 to 7 automobiles.
14. The proposed Master Plan would provide 265 on-site, striped parking spaces. An additional 60 or more vehicles could also be accommodated on-site using valet parking. The typical day maximum hourly (non-special event) on-site parking demand that would be expected after completion of the Master Plan would be 191 vehicles during a peak season weekday and 95 vehicles during a peak season Saturday, thus post-project parking would be more than adequate for typical day, and typical day plus smaller event, activities.
15. Conclusions: The project would not result in significant impacts to traffic and transportation as evaluated per the City's significance criteria (listed in Section IV.D). The project would not result in significant impacts to intersections as defined by the City of St. Helena's transportation impact criteria. Due to the project's reduction of through traffic on SR 29-128 (Main Street), with 2018 and 2035 (with Master Plan) volumes, the CIA driveway/S.R.29-128 intersection would experience less average delay on the CIA

driveway approach to the state highway during the weekday AM and PM peak hours. Due to the project's reduction of through traffic on SR 29-128 (Main Street) and minor increase of traffic on the Pratt Avenue westbound approach to Main Street, "with project" conditions would result in a reduced overall traffic volume at the Pratt Avenue/S.R. 29-128 intersection. Project volumes would not result in a "letter" change in intersection Level of Service operation, and would result in minor increased delay due to 4 additional westbound trips, 3 of which would be added to westbound Pratt Avenue left turns during the AM and PM peak hours – adding to the existing extreme delays on the westbound Pratt Avenue approach. Project traffic would not result in signal warrant #1 or #3 being met.

### III. PROPOSED PROJECT

The Culinary Institute of America at Greystone (the "CIA") currently has an enrollment of close to 200 students at its 2555 Main Street property. The CIA currently has housing for 47 students in dormitories on its Main Street site (45 are currently occupied) and 101 students on its Vineyard Lodge property at 830 Pratt Avenue (96 are currently occupied). The CIA recently purchased the American Center for Wine Food & the Arts ("Copia") in the City of Napa. The acquisition of Copia will allow the CIA to reduce activities at its Greystone campus by relocating employees, programs, and event activities to Copia. As a result, the CIA proposes a new master plan for its Greystone campus in which it will renovate portions of the Greystone interior to provide additional and more efficient educational facilities. As part of the master plan the CIA proposes expanding student enrollment by 100 students to 300. At the same time it proposes to add housing for an additional 123 students at its Vineyard Lodge site. Between existing housing at Greystone and Vineyard Lodge, and the new housing at Vineyard Lodge, the CIA will have housing for 271 of its total 300 students. Students residing at Vineyard Lodge will continue to be required to use shuttles to go to and from the Vineyard Lodge housing and the Greystone campus.

The proposed CIA Master Plan is projected for completion and full operation in year 2018. The plan includes:

- expansion of the Associate in Occupational Studies in Culinary Arts (AOS) degree program from 200 to 300 students,
- expansion of Vineyard Lodge student housing from 101 beds to 224 beds
- relocation of existing weekday activities from Greystone to the former Copia site in the City of Napa, specifically:
  - 5 of the existing 10 administrative staff will move
  - 14 (all) participants in the Strategic Initiatives Group program will move
  - 1 of the existing 6 purchasing staff will move
  - 26 of the existing 42 Continuing Ed and Food Enthusiast Program students will move
  - Shift # 2 restaurant staff (10 staff) will all move, and restaurant patrons served will be half of existing levels, all served by students on site. The Wine Spectator at Greystone Restaurant (WSGR) is currently operated as a 190 seat restaurant open 362 days per year with lunch and dinner service. The CIA has also operated a teaching kitchen for a number of years in the Flavor Discovery Center (FDC) that allowed students in the Farm to Table component of their educational program to have educational experiences from

growing and harvesting the food, to preparing and serving the food in an educational setting with 58 seats. In conjunction with the use permit amendments contemplated under this Master Plan, the WSGR will be eliminated. The program in the FDC will then become the CIA's remaining restaurant (aside from the Café) and will continue to be student-run but will serve meals only five days a week for 36 weeks (180 days) per year.

- Tourist activity will decrease due to the elimination of the 190-seat WSGR and relocation of many of the enthusiast programs to Copia.

## IV. EXISTING CONDITIONS (WITHOUT PROJECT)

### A. SITE DESCRIPTION, ROADWAYS, SIDEWALKS, BIKEWAYS AND PUBLIC TRANSIT

The CIA campus is located along the west side of the two-lane S.R.29-128 highway in the northern part of the City of St. Helena (see **Figure 1**). A single driveway connection is provided to the CIA with a 150-foot-long left turn lane in place on the northbound S.R.29-128 intersection approach (see **Figure 2**). The CIA driveway has single entry and exit lanes and the exit lane does not have enough width on its approach to S.R.29-128 to allow left and right turning vehicles to separate. The S.R.29-128 posted speed limit adjacent to the CIA is 45 miles per hour, although speeds as high as 60 miles per hour were observed during several field surveys. The Culinary Institute of America currently has 265 paved and striped parking spaces, most of which are open to the public, staff and students; valet parking can accommodate an additional 60 or more vehicles on-site during special events.

**State Route 29-128 (SR 29-128)** is a two-lane north-south highway in the City of St. Helena. At the Pratt Avenue tee intersection the roadway is 48 feet wide curb to curb. A 75-foot-long left turn lane is provided on the southbound SR 29-128 approach to Pratt Avenue. Curb, gutter and sidewalk line both sides of the highway at Pratt Avenue. North of Pratt Avenue there is a tree-lined, unsurfaced pedestrian path along the west side of the highway and an unsurfaced bicycle-pedestrian path along the east side of the highway.

**Pratt Avenue** is a two-lane collector roadway connecting SR 29-128 with Silverado Trail. It is 40 feet wide in the vicinity of SR 29-128. Pratt Avenue is stop sign controlled on its approach to SR 29-128 and the westbound approach lane is 20 feet wide, allowing left and right turning vehicles to separate. Fronting the CIA's Vineyard Lodge, the Pratt Avenue travel lanes are 25.5 feet wide, and along the north side (the Vineyard Lodge frontage), there is a 13-foot wide, 160+-foot long parking bay. Sidewalks are in place fronting the project site, but sidewalks are discontinuous along the north and south sides Pratt Avenue.

**Figure 3** shows existing lane geometries and intersection control.

### ***Bicycle and Multi-Use Path Facilities***

St. Helena's existing and proposed bicycle network is defined in the *St. Helena Bicycle Plan*, which is tied into, and consistent with, the *Napa Countywide Bicycle Plan*. As stated in the Plan, the network includes Class I paths, Class II bicycle lanes, and Class III bike routes in order to



maximize connectivity throughout the community and to destinations beyond St. Helena.

Bicycle Facilities relevant to the project area are defined below, consistent with the *St. Helena Bicycle Plan (January 2012)*.

#### Class I - Multi-Use Path

Class I bicycle facilities, known as bike paths, are multi-use facilities that provide a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross flows of motorized traffic minimized.

#### Class II Bike Lane

Class II facilities, known as bike lanes, provide a striped and signed lane for one-way bicycle travel on a street or highway. The minimum width for bike lanes ranges between four and five feet depending upon the edge of roadway conditions (curbs). Bike lanes are demarcated by a six-inch white stripe, signage and pavement legends.

#### Class III Bike Route

Class III facilities, known as bike routes, provide signs for shared use with motor vehicles within the same travel lane on a street or highway. Bike routes may be enhanced with warning or guide signs and shared lanes marked with pavement stencils. While Class III routes do not provide measures of separation, they have an important function in providing continuity to the bikeway network.

Figure 1 of the St. Helena Bike Plan shows the following for study roadways:

State Route 29 (Main Street) northbound from Pratt Avenue, is proposed as a link in the planned countywide Vine Trail Alignment, with a Class I Multi-Use Bike Path northbound, extending past the CIA-Greystone facility, north as far as Calistoga. Just east of S.R. 29 (Main Street) on Pratt Avenue, the Vine Trail Alignment loops north to connect to a proposed York Creek Class I Multi-Use Bike Path, then rejoins S.R. 29 just north of Pratt Avenue. State Route 29 (Main Street) southbound is an existing Primary Class II Bike Route and is proposed to have a Class II Bike Lane.

Eastbound Pratt Avenue between State Route 29 (Main Street) and the railroad tracks is proposed to have a Class II Bike Lane; through this segment, westbound Pratt Avenue is proposed to have a Class I Multi-Use Bike Path and is a link in the planned Countywide Vine Trail Alignment. Eastbound Pratt Avenue between the railroad tracks and Silverado Trail, which includes the portion of Pratt Avenue fronting the Vineyard Lodge site, is proposed to have a Class III Bike Route. These facilities would connect with matching improvements on State Route 20 (Main Street) north of Pratt Avenue, and on Silverado Trail north and south of Pratt Avenue.

#### ***Public Transit***

The VINE is the region's bus system for the County of Napa. Two routes pass through St. Helena along S.R. 29: routes 10 and 29. Route 10 provides service from Calistoga to Napa, including



stops in St. Helena, Rutherford and Oakville, running seven days a week, all day and including weekends. Route 29, the Vine Express, is a commuter bus operating from early morning through late afternoon, Monday through Friday. The Vine Express extends from Calistoga to the Vallejo Ferry Terminal and El Cerrito BART. Service hours are Monday through Friday, 5:20 am to 9:10 pm, Saturday 6:00 am to 8:10 pm, and Sundays 8:30 am to 7:00 pm.

The bus stops nearest the project site are two Route 10 northbound stops located at the Pratt Avenue/SR 29 (Main Street) intersection and opposite CIA Greystone, on the east side of the highway.

The *St. Helena Shuttle* is an on-demand shuttle service available for a fee of \$1.00 per trip. Service is available Monday through Friday 7:00 am to 9:00 PM, Friday and Saturday 7:00 am to 11:00 pm, and Sunday (May through November) 11:00am to 9:00 pm.

*VINE Go* is an origin to destination, shared ride service which provides demand response for persons with disabilities in the cities of Calistoga, St. Helena, Napa, American Canyon, the Town of Yountville and the unincorporated areas of Napa County. VINE Go is the ADA paratransit service complementary to the fixed route operators and runs at times corresponding to the fixed routes.

## **B. OPERATION OF THE CULINARY INSTITUTE OF AMERICA DRIVEWAY CONNECTION TO STATE ROUTE 29-128, AND THE PRATT AVENUE/STATE ROUTE 29-128 INTERSECTION**

### **1. Volumes**

Traffic counts were conducted by Crane Transportation Group at the CIA Driveway/S.R.29-128 intersection from 6:00 AM to 6:00 PM and on Saturday, May 14, from 1:00 PM to 6:00 PM. Peak hour counts were conducted at the Pratt Avenue/S.R. 29-128 intersection on Thursday, May 12, from 7:00 – 9:00 AM and 4:00 – 6:00 PM. The peak hours of total traffic passing through the intersections were determined to be 7:45 to 8:45 AM and 4:00 to 5:00 PM on Thursday, and from 1:15-2:15 at the CIA Driveway/S.R.29-128 intersection on Saturday. Due to overall activity being greater at the CIA facility on weekdays than on weekends, this analysis focuses on weekday activities.

In order to determine traffic conditions during the peak summer/fall tourist season and a time of peak activity at CIA, the May counts were adjusted based upon Caltrans' seasonal traffic count information (PeMS data) for Highway 29 in St. Helena. Resultant peak season Thursday peak hour volumes are presented in **Figure 4**.

### **2. Analysis Methodology**

Transportation engineers and planners commonly use a grading system called level of service (LOS) to measure and describe the operational status of the local roadway network. LOS is a description of the quality of a roadway facility's operation, ranging from LOS A (indicating free-flow traffic conditions with little or no delay) to LOS F (representing oversaturated conditions where traffic flows exceed design capacity, resulting in long queues and delays).

Intersections, rather than roadway segments between intersections, are almost always the capacity controlling locations for any circulation system.

**Signalized Intersections.** For signalized intersections, the 2010 *Highway Capacity Manual* (Transportation Research Board, National Research Council) methodology was utilized. With this methodology, operations are defined by the level of service and average control delay per vehicle (measured in seconds) for the entire intersection. For a signalized intersection, control delay is the portion of the total delay attributed to traffic signal operation. This includes delay associated with deceleration, acceleration, stopping, and moving up in the queue. **Table 1** summarizes the relationship between delay and LOS for signalized intersections.

**Unsignalized Intersections.** For unsignalized (all-way stop-controlled and side-street stop-controlled) intersections, the 2010 *Highway Capacity Manual* (Transportation Research Board, National Research Council) methodology for unsignalized intersections was utilized. For side-street stop-controlled intersections, operations are defined by the level of service and average control delay per vehicle (measured in seconds), with delay reported for the stop sign controlled approaches or turn movements, although overall delay is also typically reported for intersections along state highways. For all-way stop-controlled intersections, operations are defined by the average control delay for the entire intersection (measured in seconds per vehicle). The delay at an unsignalized intersection incorporates delay associated with deceleration, acceleration, stopping, and moving up in the queue. **Table 2** summarizes the relationship between delay and LOS for unsignalized intersections.

### 3. Existing Peak Season Operation

**Table 3** shows that during the peak traffic hour on a summer/fall 2016 weekday, with 2016 (without Master Plan project) volumes, the CIA driveway/S.R.29-128 intersection would experience LOS C operation on the CIA driveway approach to the state highway during a weekday AM peak hour, with 20.6 seconds average delay for eastbound CIA driveway turns, and LOS D operation during the PM peak hour, with 29.3 seconds average delay for eastbound CIA driveway turns. The average delay for left turns from northbound S.R.29-128 into the CIA campus would be less than 10 seconds during both the AM and PM peak hours.

With 2016 (without Master Plan project) volumes, the Pratt Avenue/S.R. 29-128 intersection would experience LOS D operation, with 30.3 seconds average delay for westbound Pratt Avenue turns during the weekday AM peak hour, and LOS E operation with 39.3 seconds average delay during the weekday PM peak hour.

**C. SIGNAL WARRANT EVALUATION – PRATT AVENUE/S.R. 29-128  
(MAIN STREET)**

**1. Analysis Methodology and Reason for Urban Warrant, Rather than Rural Warrant Analysis**

Traffic signals are used to provide an orderly flow of traffic through an intersection. Many times they are needed to offer side street traffic an opportunity to access a major road where high volumes and/or high vehicle speeds block crossing or turn movements. They do not, however, increase the capacity of an intersection (i.e., increase the overall intersection's ability to accommodate additional vehicles) and, in fact, often slightly reduce the number of total vehicles that can pass through an intersection in a given period of time. Signals can also cause an increase in traffic accidents if installed at inappropriate locations.

There are 9 possible tests for determining whether a traffic signal should be considered for installation. These tests, called "warrants", consider criteria such as actual traffic volume, pedestrian volume, presence of school children, and accident history. The intersection volume data together with the available collision histories were compared to warrants contained in the *Manual on Uniform Traffic Control Devices* (MUTCD), Federal Highway Administration, 2014, California Supplement, which has been adopted by the State of California as a replacement for *Caltrans Traffic Manual*. Section 4C of the MUTCD provides guidelines, or warrants, which may indicate need for a traffic signal at an unsignalized intersection. As indicated in the MUTCD, satisfaction of one or more warrants does not necessarily require immediate installation of a traffic signal. It is merely an indication that the local jurisdiction should begin monitoring conditions at that location and that a signal may ultimately be required.

Caltrans Signal Warrant 3, the peak hour volume warrant, is often used as an initial check of signalization needs since peak hour volume data is typically available and this warrant is usually the first one to be met. Warrant 3 is based on a curve and takes only the hour with the highest volume of the day into account. Warrant 3 employs two charts, one applicable to "urban" conditions, and another applicable to "rural" conditions. The MUTCD states that if the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, Figure 4C-4 [rural warrant chart] may be used in place of Figure 4C-3 [urban warrant chart] to evaluate the [warrant criteria].

The Pratt Avenue/S.R. 29-128 (Main Street) intersection *has urban characteristics*, as follows:

- The 85<sup>th</sup> percentile speed on the S.R. 29-128 (Main Street) intersection approaches is less than 40 miles per hour.
- Although the population of the City of St Helena is less than 10,000, S.R. 29-128 (Main Street) through St. Helena is a region-serving highway that experiences urban-type back-ups with slow-moving traffic at Pratt Avenue and stop and go traffic in central St. Helena every weekday afternoon as well as every Saturday and Sunday afternoon due to heavy tourist traffic, commuter through-traffic and local traffic volumes.

- The City of St Helena recognizes the urban character of the highway in its “minimum acceptable LOS D” standard for this intersection.

In the most recent traffic study conducted for this intersection, the *Traffic Impact Report for Las Alcobas Hotel, St Helena, CA*, May 29, 2015, prepared for Caltrans District 4 by Crane Transportation Group, the urban warrant was applied. Caltrans approved the report with no dissenting comment regarding use of urban Warrant 3 for the 2015 study.

In this report, at the request of the City traffic engineer, Warrant #1, the test for the highest eight hour volumes is also included, and the accident warrant (Warrant #7) has been evaluated at the SR 29-128/Pratt Avenue intersection based upon accident data provided by the City of St Helena through the SWITRS (Statewide Integrated Traffic Records System) data base. The feasibility of a roundabout at this location is constrained by existing structures: a residence on the east, a new hotel access driveway (including a historic wall) on the west, as well as right-of-way limitations. A roundabout is not considered feasible at this intersection due to space constraints. (See the **Appendix** for detailed analysis of a roundabout at the SR 29-128/Pratt Avenue intersection.)

## 2. Existing Conditions

Tables 4a and 4b show that volumes at the Pratt Avenue/ SR 29-128 intersection would not meet urban warrant #1 (the warrant for the 8 highest volume hours) or urban peak hour warrant #3 criteria for signalization during either of the weekday peak traffic hours (AM or PM) for existing conditions Please see the tables and warrant charts in the **Appendix**.

Warrant #7, the Crash Experience signal warrant conditions are intended for application where the severity and frequency of crashes are the principal reasons to consider installing a traffic control signal.

California MUTCD, Chapter 4C specifies that the need for a traffic control signal shall be considered if an engineering study finds that *all* of the following criteria are met:

- A. Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency; and
- B. Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash; and
- C. For each of any 8 hours of an average day, the vehicles per hour (vph) given in both of the 80 percent columns of Condition A in Table 4C-1 (see Section 4C.02), or the vph in both of the 80 percent columns of Condition B in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80 percent of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

Accident data provided by the City of St. Helena from SWITRS (Statewide Integrated Traffic Reporting System) revealed that over the past five years, there have not been five or more reported crashes at this intersection within any 12-month period. At most, there were 4 crashes between 10/21/11 and 10/24/12. There were three reported crashes in 2011, one in 2012, two in 2013 and 2014, and one in 2015. The Appendix includes the accident data provided by the City.

**D. CITY OF ST. HELENA GENERAL PLAN (1993) SIGNIFICANCE  
CRITERIA AND THRESHOLDS OF SIGNIFICANCE USED IN IMPACT  
EVALUATIONS IN ST. HELENA**

The significance criteria used for analyzing and determining the project's level of impact on traffic and transportation are described in this section.

**(1) Thresholds of Significance**

Appendix G of the CEQA Guidelines provides that a project would have a significant transportation and traffic impact if it would:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths and mass transit;
- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated road or highways;
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- Substantially increase hazards due to a design feature (i.e., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access; or
- Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

The City of St. Helena's adopted transportation impact criteria (1993 General Plan) are as follows:

a. All signalized intersections in St. Helena should maintain LOS C except along Main Street, where LOS D is permitted. Exceptions to this policy are that lower service levels shall be permitted at any location where the existing LOS does not meet this standard and in which case the LOS cannot be worsened any further.

b. All signalized intersections must maintain LOS C. If the LOS degrades below LOS C, an evaluation of the need for traffic signalization shall be undertaken according to standard

Caltrans signal warrants as described below. If signals are not initially warranted, the location shall continue to be monitored for signal warrants on a regular basis.

## V. FUTURE YEAR 2018 and YEAR 2035 (WITHOUT PROJECT) CONDITIONS

### A. ANALYSIS HORIZON YEARS FOR WITHOUT PROJECT OPERATING CONDITIONS

#### 1. Overview

CIA management projects that the proposed Master Plan could be fully completed by 2018, and General Plan projections extend to year 2035. Therefore, these horizon years have been used for evaluation.

#### 2. Year 2018 and Year 2035 Base Case (Without Master Plan) Traffic Volumes

Year 2018 weekday AM and PM peak hour (without project) volumes have been developed using traffic growth projections developed for S.R.29-128 in St. Helena as part of the General Plan traffic model. Projections contained in the model show an approximate 2.25 percent per year growth rate for S.R.29-128 traffic between 2015 and 2035. These rates have been applied to the year 2016 summer/fall AM and PM peak hour volumes to achieve 2018 projections at the study intersections (see **Figure 5**); in addition, volumes from the Las Alcobas Hotel driveway opposite Pratt Avenue, have been added.<sup>3</sup> Year 2035 weekday AM and PM peak hour volumes are derived directly from the General Plan projections at the Pratt Avenue/S.R. 29-128 intersection, with volumes at the CIA driveway factored to be consistent with the General Plan projections (see **Figures 6 and 7**).

#### 3. Year 2018 Peak Season Base Case (Without Master Plan Project) Intersection Operation

**Table 3** shows that during the peak traffic hour on a summer/fall 2018 weekday, with 2018 (without project) volumes, the CIA driveway/S.R.29-128 intersection would experience LOS C operation on the CIA driveway approach to the state highway during a weekday AM peak hour, with 21.8 seconds average delay for eastbound CIA driveway turns, and LOS D operation during the PM peak hour, with 32.0 seconds average delay for eastbound CIA driveway turns. The average delay for left turns from northbound S.R.29-128 into the CIA campus would be less than 10 seconds during both the AM and PM peak hours.

With 2018 (without project) volumes, the Pratt Avenue/Las Alcobas Hotel Driveway/S.R. 29-128 intersection would experience AM peak hour LOS E operation, with 35.9 seconds

<sup>3</sup> The Las Alcobas Hotel will have 68 rooms, a spa for guests only, a 40-seat quality restaurant and one special event per month. Source: *Traffic Impact Report for Las Alcobas Hotel, St Helena, CA* May 29, 2015, prepared for Caltrans District 4 by Crane Transportation Group.

average delay for turns from the eastbound Las Alcobas Hotel driveway, and LOS F operation, with 64.0 seconds average delay for turns from westbound Pratt Avenue. PM peak hour would experience LOS E operation, with 36.4 seconds average delay for turns from the eastbound Las Alcobas Hotel driveway, and LOS F operation, with 93.4 seconds average delay for turns from westbound Pratt Avenue.

#### **4. Year 2035 Peak Season Base Case (Without Master Plan Project) Intersection Operation**

**Table 3** shows that during the peak traffic hour on a summer/fall 2035 weekday, with 2035 (without project) volumes, the CIA driveway/S.R.29-128 intersection would experience LOS E operation on the CIA driveway approach to the state highway during a weekday AM peak hour, with 37.4 seconds average delay for eastbound CIA driveway turns, and LOS F operation during the PM peak hour, with 82.7 seconds average delay for eastbound CIA driveway turns. The average delay for left turns from northbound S.R.29-128 into the CIA campus would be less than 11 seconds during both the AM and PM peak hours.

With 2035 (without project) volumes, the Pratt Avenue/Las Alcobas Hotel Driveway/S.R. 29-128-128 intersection would experience AM peak hour LOS F operation, with 87.1 seconds average delay for turns from the eastbound Las Alcobas Hotel driveway, and LOS F operation, with extreme delay (over 120 seconds average delay) for turns from westbound Pratt Avenue. PM peak hour would experience LOS F operation, with 92.1 seconds average delay for turns from the eastbound Las Alcobas Hotel driveway, and LOS F operation, with extreme delay (over 120 seconds average delay) for turns from westbound Pratt Avenue.

### **B. SIGNAL WARRANT EVALUATION**

#### **1. Year 2018 and Year 2035 Without Project Conditions**

Volumes at the Pratt Avenue/ SR 29-128 intersection would not meet warrant #1 criteria (the eight-hour signal warrant) or urban peak hour warrant #3 criteria for signalization during either of the weekday peak traffic hours for 2018 or 2035 without Master Plan conditions. However, by 2035, volumes approach meeting both signal warrant (warrant #1 and #3) criteria. Please see the tables and warrant charts in the **Appendix. Table 3** provides results for signalized operation, with LOS A, B or C for all conditions. The feasibility of a round at this location is constrained by existing structures: a residence on the east, a new hotel access driveway and historic wall on the west, as well as right-of-way limitations. A round is not considered feasible at this intersection due to extreme space constraints, as detailed in a memorandum prepared by Summit Engineering (10/21/16) showing the layout of a 150-foot round diameter overlay of the intersection. The memorandum is included in the appendix to this study.

### **C. PROPOSED LEFT TURN LANE DESIGN**

The civil engineer for the Las Alcobas Hotel, Riechers Spence Associates, prepared a design<sup>4</sup> for the proposed northbound left turn lane with a length of 150 feet. This length would be more than adequate to accommodate the projected maximum storage demand.

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<sup>4</sup> January 6, 2015.



## VI. CULINARY INSTITUTE OF AMERICA MASTER PLAN TRAFFIC AND PARKING IMPACTS

### A. PROPOSED PROJECT

The CIA Master Plan would result in the following development or activity that would result in changes to trip generation and parking demand at the Master Plan facilities.

- New Students at Greystone: 100
  - All 100 additional students would be living at the Vineyard Lodge housing on Pratt Avenue in St. Helena and attending weekday classes. These students will be shuttled to and from the CIA Greystone campus on weekdays, as they would not be allowed to use a personal vehicle to access classes, consistent with the current practice. Alternatively, some students may walk or bike. Shuttle bus service is currently provided every 15 minutes from early morning (5:30 AM) to end of the student day (9:30 PM).
  - For traffic and parking analysis purposes, no new students are assumed to be living off-site and commuting to the CIA-Greystone for weekday classes. All new students would reside at the Vineyard Lodge on Pratt Avenue. Some students currently commuting from off-site would be able to find CIA-housing under “with Master Plan” conditions, as 271 beds would be available for the 300-student population.

### B. PROJECT TRIP GENERATION

#### 1. ITE Trip Generation Standard Rates are not Applicable

The standard engineering reference for determining the amount of traffic generated by a specific land use is the Institute of Transportation Engineers (ITE) *Trip Generation* reference manual. However, for a facility with a wide range of activities and programs, such as the CIA’s Greystone facility, there is no applicable “standard” trip generation rate available in the historical data supplied by ITE. Greystone has a wide range of classes, starting at 6:00 AM and continuing as late as 8:00 or 9:00 PM on a daily basis, in addition to a restaurant, café, retail shop, museum, and special events. The majority of students are shuttled to and from class from off-site (Vineyard Lodge) housing operated by the CIA, via shuttles running every 15 minutes from 5:30 AM to 9:30 PM daily. A facility this unique and one-of-a-kind requires hourly projections of programs and parking requirements for all activities. This has been the approach to planning for the Greystone facility since 2003 when the last major Master Plan traffic and parking analysis was prepared for this facility. For this reason, **Tables 7, 8, 9 and 10** were prepared to determine existing and future peak season parking requirements by hour of day, and **Appendix Tables A and B** were prepared to show hourly, all-day inbound and outbound peak season traffic volumes for weekday conditions, based upon driveway traffic counts, and closely tied to the peak season parking tables.

## 2. Management-Approved Projections of Inbound and Outbound Trips Based Upon Current and Planned Programs and Activities at Greystone and Maximized Student Housing Occupancy at Greystone and Vineyard Lodge

This study is based upon CIA management-approved projections regarding the planned relocation of programs and staff from the Greystone campus to the new facility in Napa, and the intention to maximize use of CIA-managed housing for students. The CIA can provide housing at lower cost than students can find off-site, outside of CIA facilities. The CIA provides all needed transportation for its students, including rental cars, when needed. All 100 new students will be housed at the expanded Vineyard Lodge, filling a long-standing need for additional CIA housing. The CIA will maintain its current all-day schedule of shuttle pick-ups/drop-offs, every 15 minutes. By increasing the size of its shuttles, it can maintain the same number of trips that occur today. These projections have been utilized to determine the net increase or decrease in Thursday AM and PM peak hour traffic due to the proposed Master Plan.

As shown in **Figure 8**, the CIA Master Plan project would result in reduced trips to and from the S.R. 29 corridor and the Greystone facility; see the Greystone Trip Generation in **Appendix Tables A and B**, detailing full-day Greystone Trip Generation.

The tables show a decrease of 21 inbound and 3 outbound during the AM peak hour, and 10 inbound and 25 outbound during the PM peak hour). The 15-trip decrease in Master Plan-related trips on SR 29-128 during summer/fall Thursday AM peak traffic conditions would be primarily related to the following reductions:

- reductions in Administrative staff; shown on **Appendix Table A** as “-5” inbound trips
- reductions in the SIG program; shown on **Appendix Table A** as “-16” inbound and “-3” outbound trips

The 21-trip decrease in Master Plan-related trips on SR 29-128 during summer/fall Thursday PM peak traffic conditions would be primarily related to the following:

- reductions in Administrative staff; shown on **Appendix Table B** as “-5” outbound trips
- reductions in the SIG program; shown on **Appendix Table B** as “-15” outbound trips
- reductions in Continuing Ed & Food Enthusiast; shown on **Appendix Table B** as “-1” inbound trip
- reduction in Restaurant Patrons; shown on **Appendix Table B** as “-1” inbound trip.
- reduction in Tourists; shown on **Appendix Table B** as “-5” inbound and “-5” outbound trips.
- reduction in afternoon deliveries; shown on **Appendix Table B** as “-3” inbound trips.

Most of the existing traffic activity associated with students living in non-CIA housing off-site occurs at non-peak traffic times (i.e. on weekdays before 7:00 AM, from 1:00 to 2:00 PM or after 8:00 PM), thus, other than shuttles running every 15 minutes between the Vineyard Lodge and Greystone facilities, only low-levels of student-related trips are reflected in project trip generation during the analyzed peak hours. There would be minor trip increases (3 inbound and 5 outbound during the AM peak hour, and 7 inbound and 5 outbound during the PM peak hour)

projected to and from the Vineyard Lodge housing, attributable to students with parking permits traveling to and from downtown St. Helena and the surrounding area during after-school hours. The weekday student trip increases are projected at low levels based on the current low-level driveway counts at Vineyard Lodge during the analyzed peak hours.

**CULINARY INSTITUTE OF AMERICA MASTER PLAN  
NET NEW TRIPS ADDED OR SUBTRACTED TO STATE ROUTE 29 BETWEEN  
PRATT AVENUE AND THE CIA'S GREYSTONE DRIVEWAY\***

**WEEKDAY (7:45-8:45 AM)\***

|                                                  | NB         | SB        |
|--------------------------------------------------|------------|-----------|
| Shuttle Bus To/From Vineyard Lodge Dorms         | 0          | 0         |
| Change due to programs being moved to Napa Copia | - 13       | -2        |
| <b>TOTAL NET NEW TRIPS</b>                       | <b>-13</b> | <b>-2</b> |

**WEEKDAY (4:00-5:00 PM)\***

|                                                                                                    | NB        | SB         |
|----------------------------------------------------------------------------------------------------|-----------|------------|
| Shuttle Bus To/From Vineyard Lodge Dorms                                                           | 0         | 0          |
| Change due to programs being moved to Napa Copia                                                   | - 6       | -15        |
| <b>TOTAL NET NEW TRIPS on SR 29 (Main Street) between Pratt Avenue and the Greystone driveway.</b> | <b>-6</b> | <b>-15</b> |

\*See **Appendix Tables A and B** showing the reduction in trips due to specific activities at the Greystone facility being moved to Copia in Napa.

**C. PROJECT IMPACTS TO OPERATION OF THE CIA DRIVEWAY/  
S.R.29-128 INTERSECTION AND PRATT AVENUE/ LAS ALCOBAS  
HOTEL DRIVEWAY/S.R. 29-128 INTERSECTION**

There would be a net decrease in traffic volumes at intersections due to the Master Plan project. Table 3 shows that Existing with project volumes would result in the CIA driveway/S.R.29-128 intersection experiencing LOS C operation on the CIA driveway approach to the state highway during a weekday AM peak hour, with 19.8 seconds average delay for eastbound CIA driveway turns (a reduction in average delay of 0.8 second), and LOS D operation during the PM peak hour, with 25.2 seconds average delay for eastbound CIA driveway turns (a reduction of 4.1 seconds). The average delay for left turns from northbound S.R.29-128 into the CIA campus would also be slightly reduced, and would remain less than 10 seconds during both the AM and PM peak hours.

With Existing volumes plus the Master Plan project, the Pratt Avenue/Las Alcobas Hotel Driveway/S.R. 29-128 intersection would experience LOS D operation, with 30.5 seconds average delay during the AM peak hour (an increase in average delay of 0.2 second), and LOS E

operation, with 39.6 seconds average delay during the PM peak hour for turns on the Las Alcobas Hotel Driveway approach (an increase in average delay of 0.3 second). The project increment of 4 outbound trips from Vineyard Lodge would add 6 percent additional traffic to the westbound intersection approach during the existing AM and PM peak hours, adding to the existing extreme delays.

With 2018 (with Master Plan project) volumes (See Figure 9), the CIA driveway/S.R.29-128 intersection would experience less average delay by 0.9 seconds (AM) and 4.8 seconds (PM) on the CIA driveway approach to the state highway the weekday AM and PM peak hours, respectively. The average delay for left turns from northbound S.R.29-128 into the CIA campus would be less than 10 seconds during both the AM and PM peak hours.

During the peak traffic hour on a summer/fall weekday morning and afternoon, with 2018 (with Master Plan project) volumes, the Pratt Avenue/Las Alcobas Hotel Driveway/S.R. 29-128 intersection would experience LOS E operation, with 35.1seconds average delay during the AM peak hour (a decrease in average delay of 0.8 second), and LOS E operation, with 35.4 seconds average delay during the PM peak hour for turns on the Las Alcobas Hotel Driveway approach (a decrease in average delay of 1.0 second). The westbound Pratt Avenue turns would experience extreme delays (LOS F) without the Master Plan project during the AM and PM peak hours; the project increment of 4 outbound trips from Vineyard Lodge would add 5.5 percent additional traffic to the westbound intersection approach during the existing AM and PM peak hours, resulting in an increased delay of 0.9 seconds (AM) and 1.0 second (PM).

With 2035 (with Master Plan) volumes, the CIA driveway/S.R.29-128 intersection would experience less average delay by 2.5 seconds (AM) and 24.9 seconds (PM) on the CIA driveway approach to the state highway during the weekday peak hours. The average delay for left turns from northbound S.R.29-128 into the CIA campus would be less than 11 seconds during both the AM and PM peak hours.

With 2035 (with Master Plan project) volumes, the Pratt Avenue/Las Alcobas Hotel Driveway/S.R. 29-128 intersection would experience LOS F operation, with 83.6 seconds average delay during the AM peak hour (a decrease in average delay of 3.5 seconds), and 88.3 seconds average delay during the PM peak hour for turns on the Las Alcobas Hotel Driveway approach (a decrease in average delay of 3.8 seconds). The westbound Pratt Avenue turns would experience extreme delays without the Master Plan project during the AM and PM peak hours; the project increment of 4 westbound trips represents 5 percent traffic added to the westbound intersection approach during the AM and PM peak hours, adding to the existing extreme delay.

## **D. SIGNAL WARRANT EVALUATION**

### **1. Year 2018 and Year 2035 With Master Plan Conditions**

Volumes at the Pratt Avenue/ SR 29-128 intersection would not meet warrant #1 criteria (the hour-hour signal warrant) or urban peak hour warrant #3 criteria for signalization during either of the weekday peak traffic hours for 2018 or 2035 with Master Plan conditions. However, by 2035, volumes approach meeting both signal warrant (warrant #1 and #3) criteria. Please see the warrant charts in the **Appendix. Table 3** provides results for signalized operation, with LOS A, B or C for all conditions.

## **E. LEFT TURN QUEUE LENGTH AT THE CIA DRIVEWAY/ S.R.29-128 INTERSECTION**

The left turn lane on the northbound S.R.29-128 approach to the CIA driveway is 150 feet long and can accommodate up to 6 to 7 automobiles. Based upon methodology contained in the Institute of Transportation Engineers (ITE) November 2001 *ITE Magazine*,<sup>5</sup> with Base Case + Master Plan traffic volumes (and no special event), the 95th percentile queue storage demand in the left-turn turn pocket during a summer/fall weekday AM and PM peak hour would be 3 vehicles (less than available storage).

## **F. CULINARY INSTITUTE OF AMERICA PARKING DEMAND**

### **1. Overview**

The CIA campus currently has 265 striped parking spaces located primarily in two major parking lots (north lot and south lot) adjacent (east and southeast of) the historic Greystone building; there is on-site parking for employees and the general public, as well as restaurant valet parking, a loading and unloading area, and spaces for service vehicles. Handicapped-accessible spaces are provided near the Greystone entrance. Event valet parking allows for 60 or more additional parking spaces when needed. In addition to regularly scheduled classes and restaurant hours, there are many small-to-large size special events held at the CIA throughout the year. Events occur on all days of the week, during the day as well as in the evening. For major special events that would exceed the on-site supply of parking, the CIA arranges in advance for remote parking and shuttle service.

Parking demand is within the available supply of on-site parking spaces during the peak activity season on weekdays and Saturday throughout the day. All students and staff must self park, while lunch and dinner guests have the choice of self parking or valet parking. Tourists and visitors primarily self park. Parking demand on weekdays and weekends peaks between noon and 2:00 PM. On Saturdays, there are no regular classes and thus few students or teachers are on campus. Administrative staff are largely absent on weekends, however, the number of guests eating at the café and restaurant and the number of drop-in tourists is higher on weekends than on weekdays.

### **2. Existing May 2016 Parking Demand**

Hourly on-site parking surveys were conducted by Crane Transportation Group on May 12 and 14, 2016, a Thursday and a Saturday. The weather was clear on both days.

**Thursday conditions:** There were no special events scheduled on Thursday; there were 50 at lunch and 75 at dinner in the restaurant; the AOS degree program had 154 students in class, and there were 26 attendees in Food Enthusiast classes.

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<sup>3</sup> *Estimation of Maximum Queue Lengths at Unsignalized Intersections*, by John T. Gard.

**Saturday conditions:** There were 110 at lunch and 100 at dinner in the restaurant; no students were in class, and there were 46 attendees in Food Enthusiast classes. There was a wedding with 150 guests occurring Saturday evening.

As shown in **Tables 5 and 6**, on both days parking demand never exceeded the available supply of on-site spaces.

### 3. Existing Peak Season Parking Demand

There is a wide variety of uses on-going at the Greystone facility. Therefore, a detailed analysis of campus activities was prepared for each hour of the day showing the Master Plan uses for all departments that would remain at the Greystone facility.

Parking counts were conducted at the Greystone parking lots on May 12 and 14, 2016, as presented in **Tables 5 and 6** for weekday and Saturday conditions respectively. As shown, for all time periods there was substantial available parking. The heaviest parking demand occurred at 2:00 PM on Thursday, when 208 cars were parked and there were 57 available parking spaces, and on Saturday at 2:00 PM with 154 cars parked and 6:00 PM when there were 156 cars parked, resulting in 111 and 109 available spaces, respectively.

Projections have been developed of the existing on-site parking demand that could be expected at Greystone during the peak activity season. Projections (by hour) are presented in **Tables 7 and 8** for weekday and Saturday conditions respectively, based upon input from CIA management. As shown, on-site parking demand would total 250 spaces by 2:00 PM on a weekday, and 157 between noon and 2:00 PM on a Saturday.

### 4. Projected Future “With Master Plan” Peak Season Parking Demand

With the CIA Master Plan’s relocated activities and all new students using the CIA shuttle services, a total of 265 paved and striped parking stalls would be provided on the CIA campus. **Tables 9 and 10** provide weekday and Saturday parking demand projections for “with Master Plan” conditions by hour of the day. As shown, for all time periods there would be a substantial amount available parking. The heaviest parking demand would occur at 2:00 PM on Thursday, when 191 cars would be parked, and noon to 2:00 PM on Saturday, when 95 cars would be parked. There would be room for an additional 60 or more vehicles to be parked on-site by valets for events.

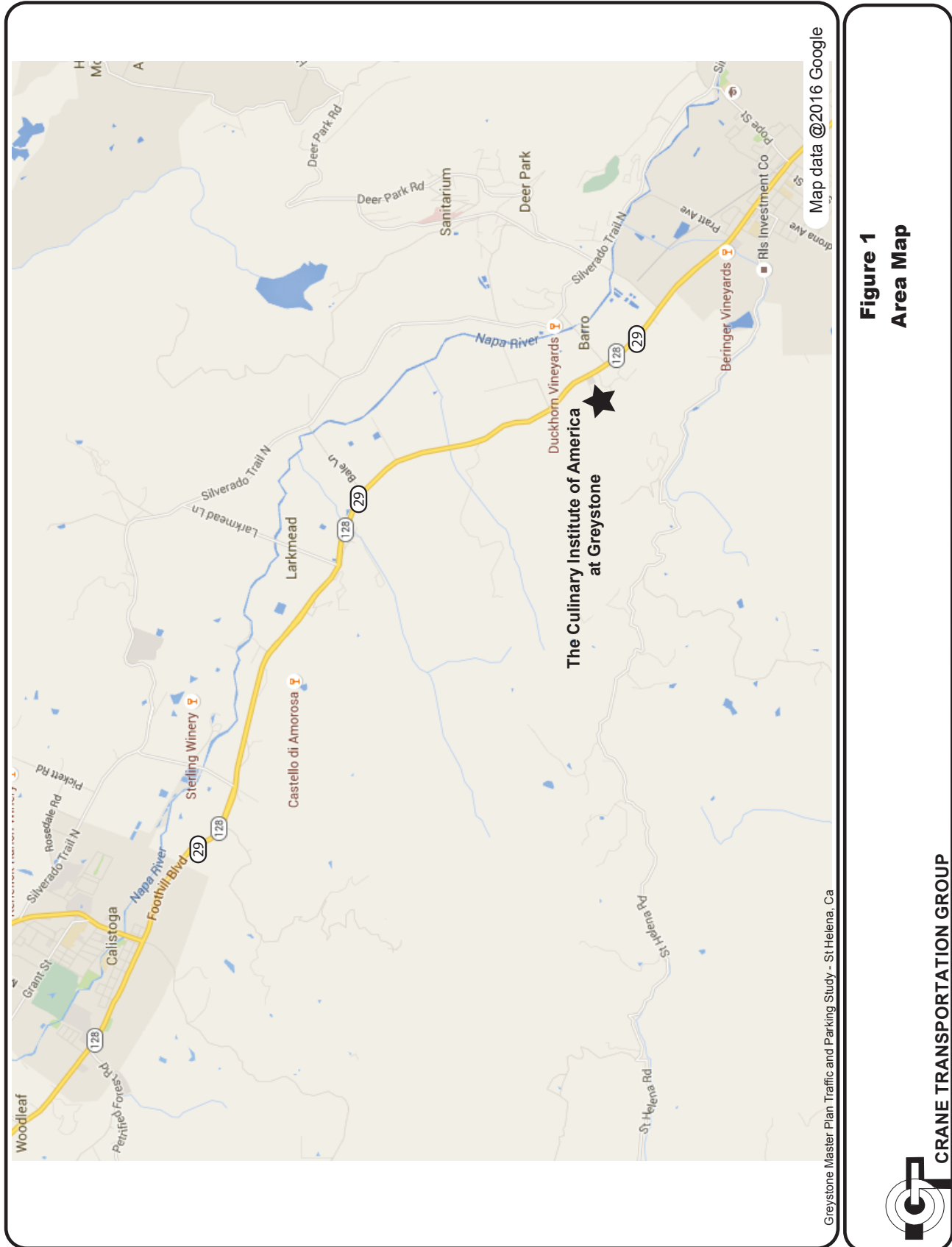
Based upon the proposed number of striped spaces, the project would provide more than adequate on-site parking for post-Master Plan peak season regular activities, with valet parking for events. However, with very large special events, use of off-site parking could still be required, as it is today.

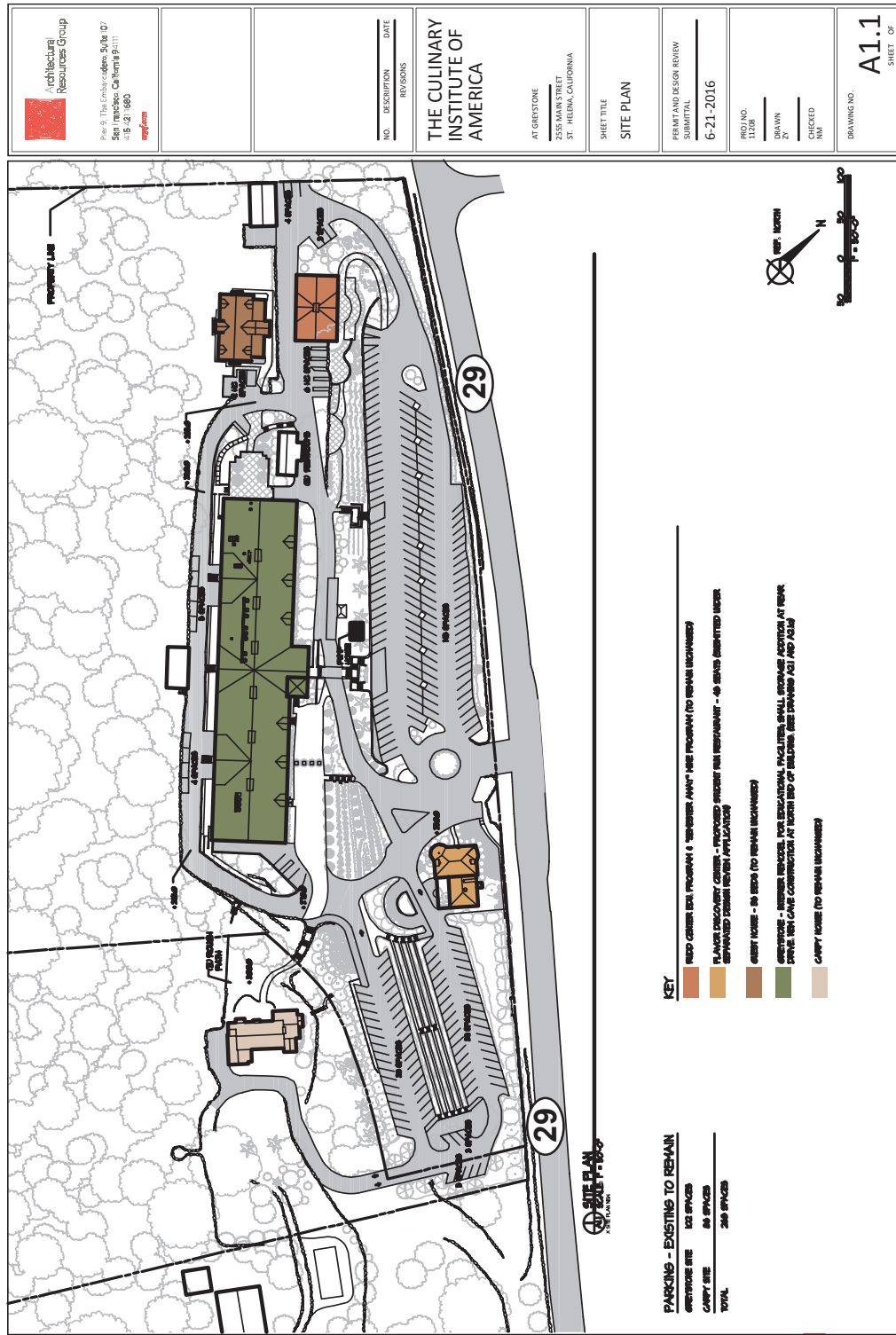
## VII. CONCLUSIONS AND RECOMMENDATIONS

- Conclusions: The project would not result in significant impacts to traffic and transportation as evaluated per the City's significance criteria (listed in Section IV.D). The project would not have significant impacts as defined in Appendix G of the CEQA Guidelines, nor would it result in significant impacts to intersections as defined by the City of St. Helena's transportation impact criteria. Due to the project's reduction of through traffic on SR 29-128 (Main Street), with 2018 and 2035 (with Master Plan) volumes, the CIA driveway/S.R.29-128 intersection would experience less average delay on the CIA driveway approach to the state highway during the weekday AM and PM peak hours. Due to the project's reduction of through traffic on SR 29-128 (Main Street) and minor increase of traffic on the Pratt Avenue westbound approach to Main Street, "with project" conditions would result in a reduced overall traffic volume at the Pratt Avenue/S.R. 29-128 intersection. Project volumes would not result in a "letter" change in intersection Level of Service operation, and would result in minor increased delay due to 3 added westbound Pratt Avenue left turns during the AM and PM peak hours – adding to the existing extreme delays on the westbound Pratt Avenue approach. Project traffic would not result in signal warrant #1 or #3 being met.
- Recommendation: It is advised, and it is the current policy of CIA management, to use parking spaces on the south lot parking area for employees (i.e. long duration parkers), leaving the majority of the north lot parking stalls for quicker turnover activities such as student commuters, tourists and guests.



## **FIGURES**

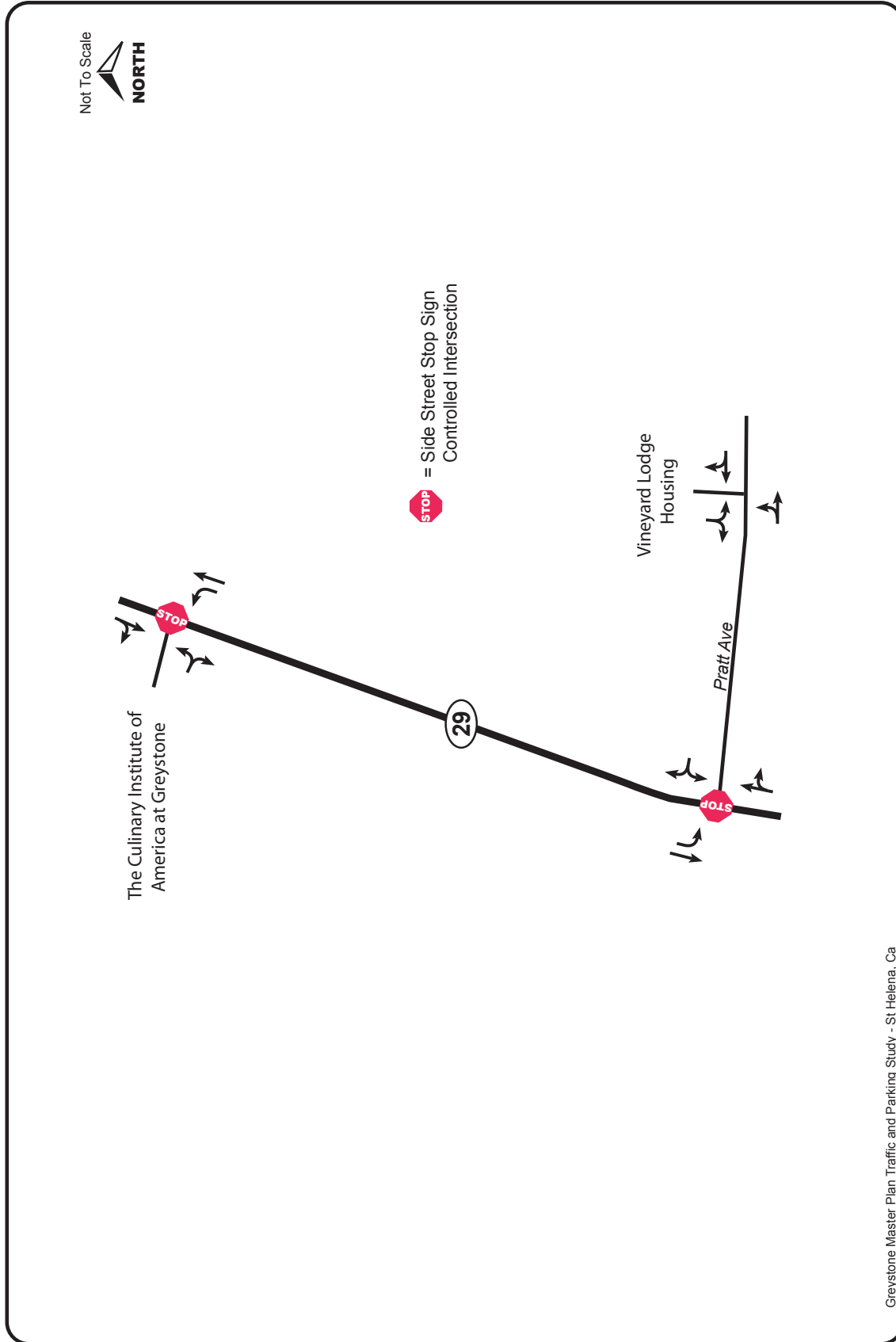




## Figure 2 Graystone Site Plan

Greystone Master Plan Traffic and Parking Study - St Helena, Ca



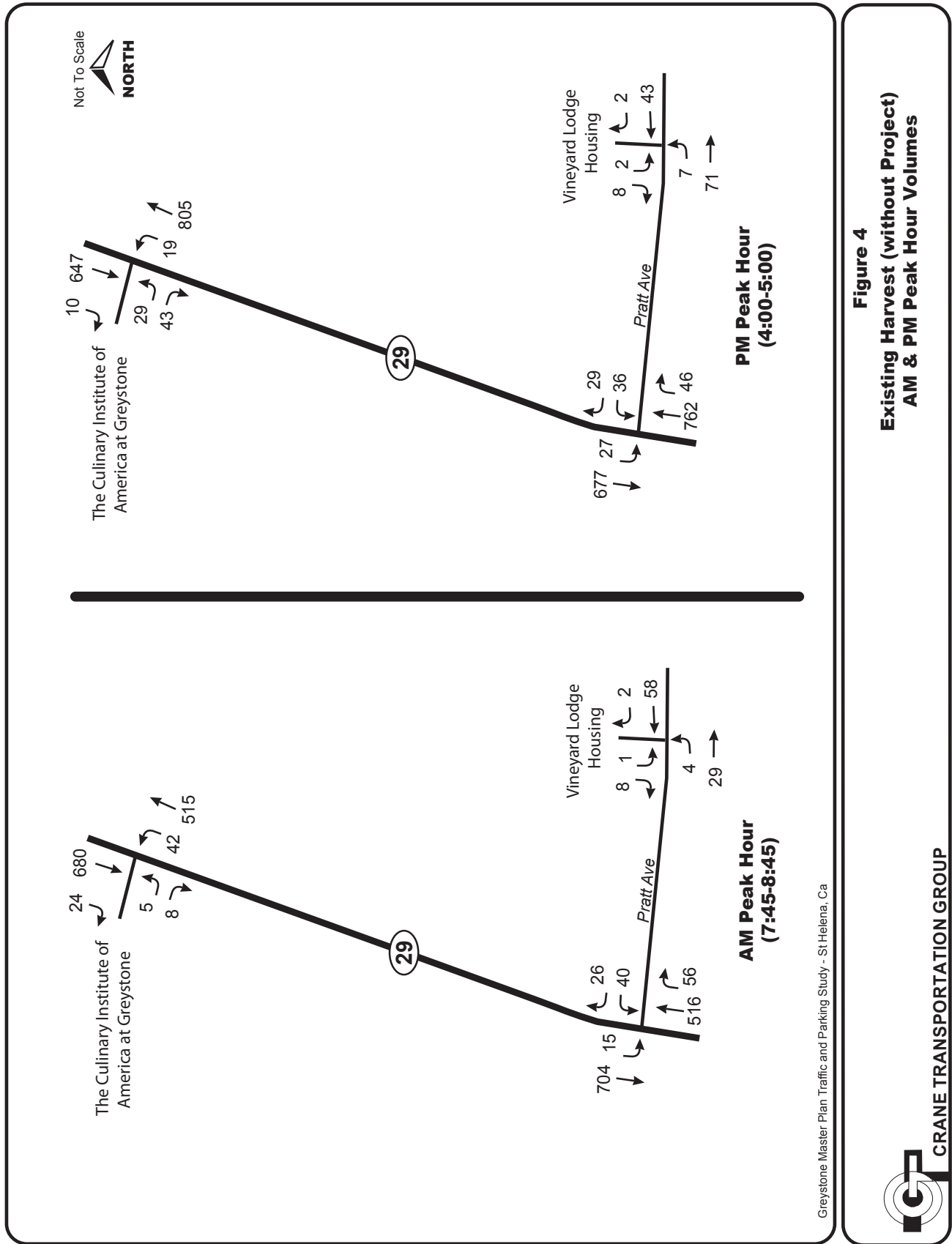


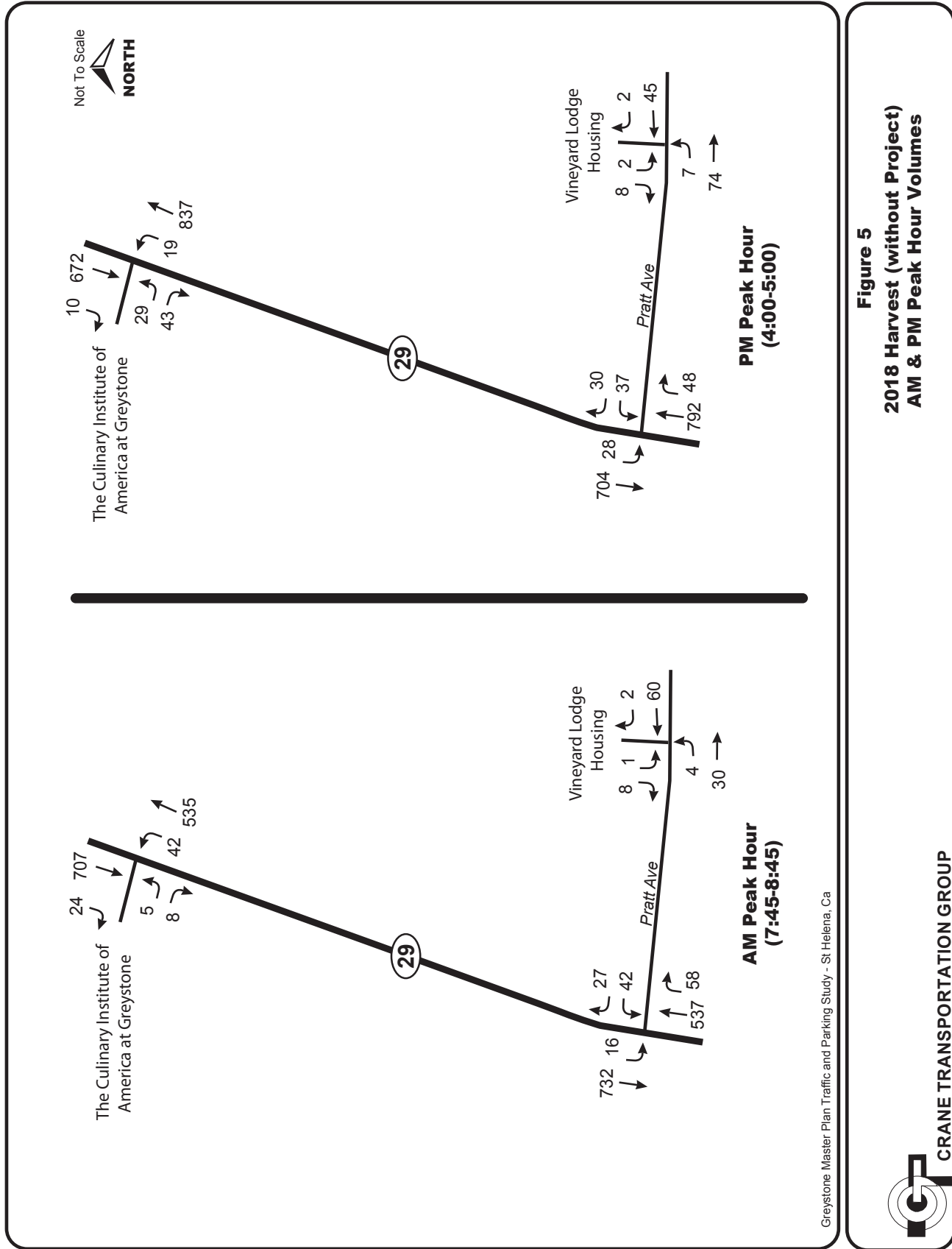
Greystone Master Plan Traffic and Parking Study - St Helena, Ca

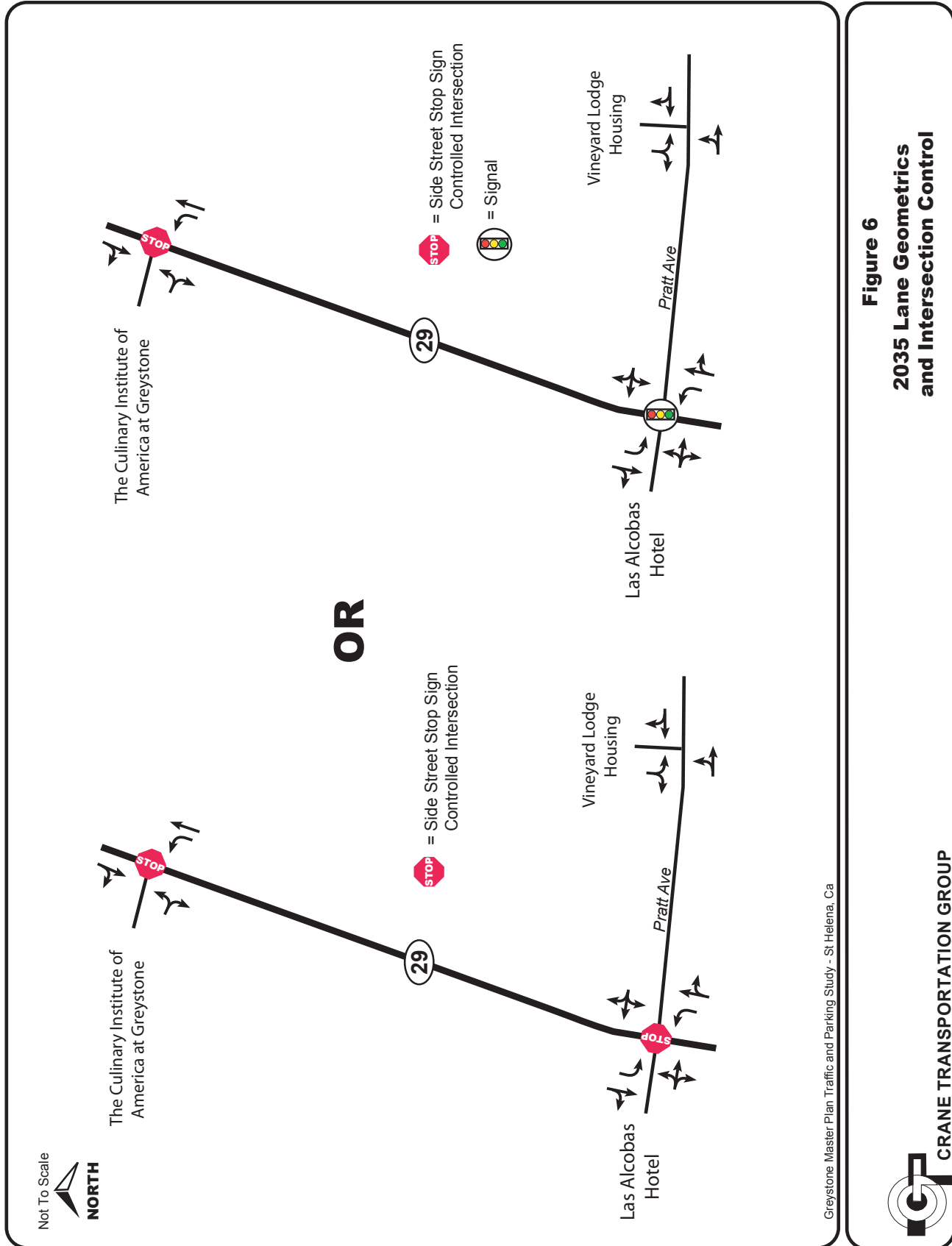


CRANE TRANSPORTATION GROUP

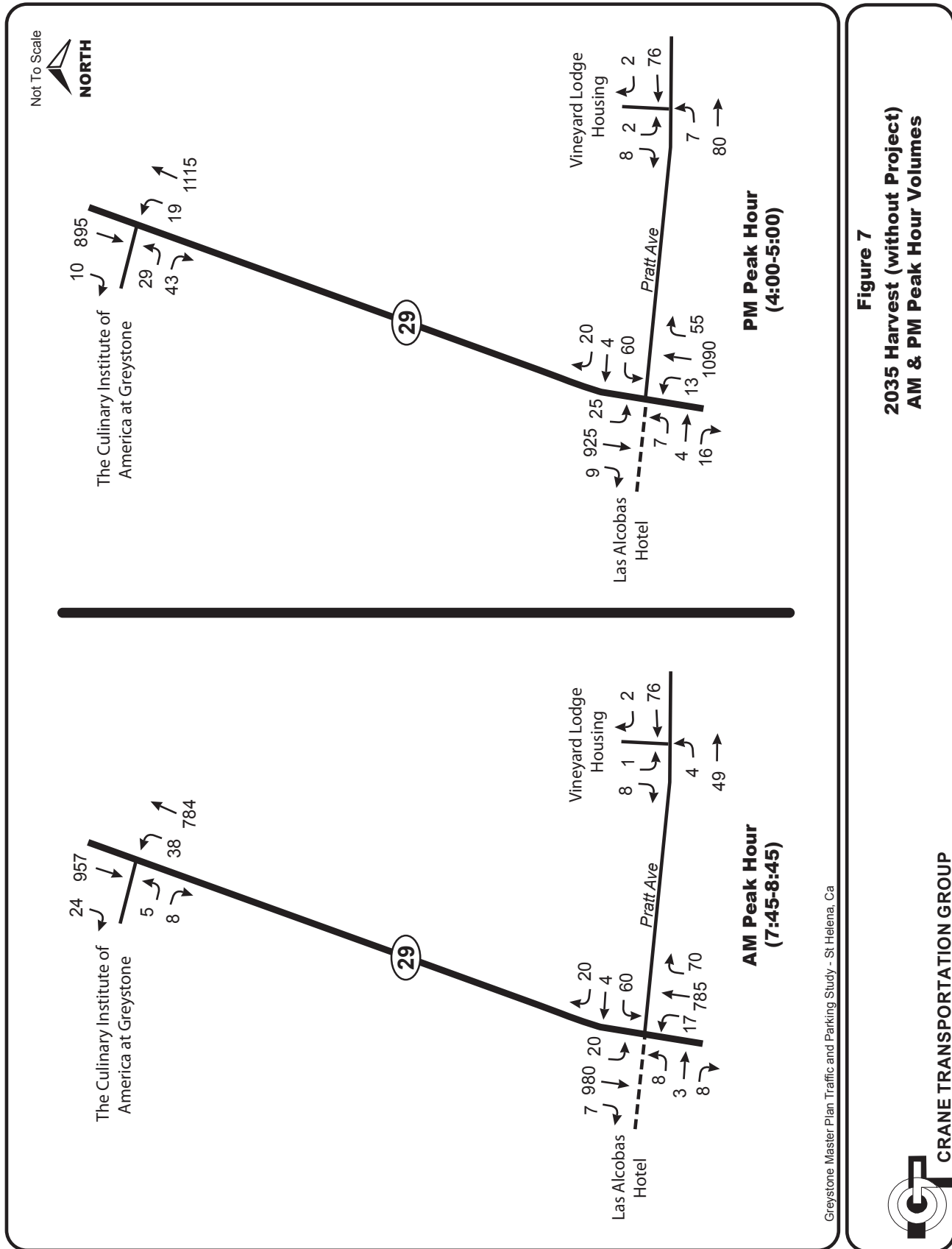
**Figure 3**  
**Existing Lane Geometrics**  
**and Intersection Control**

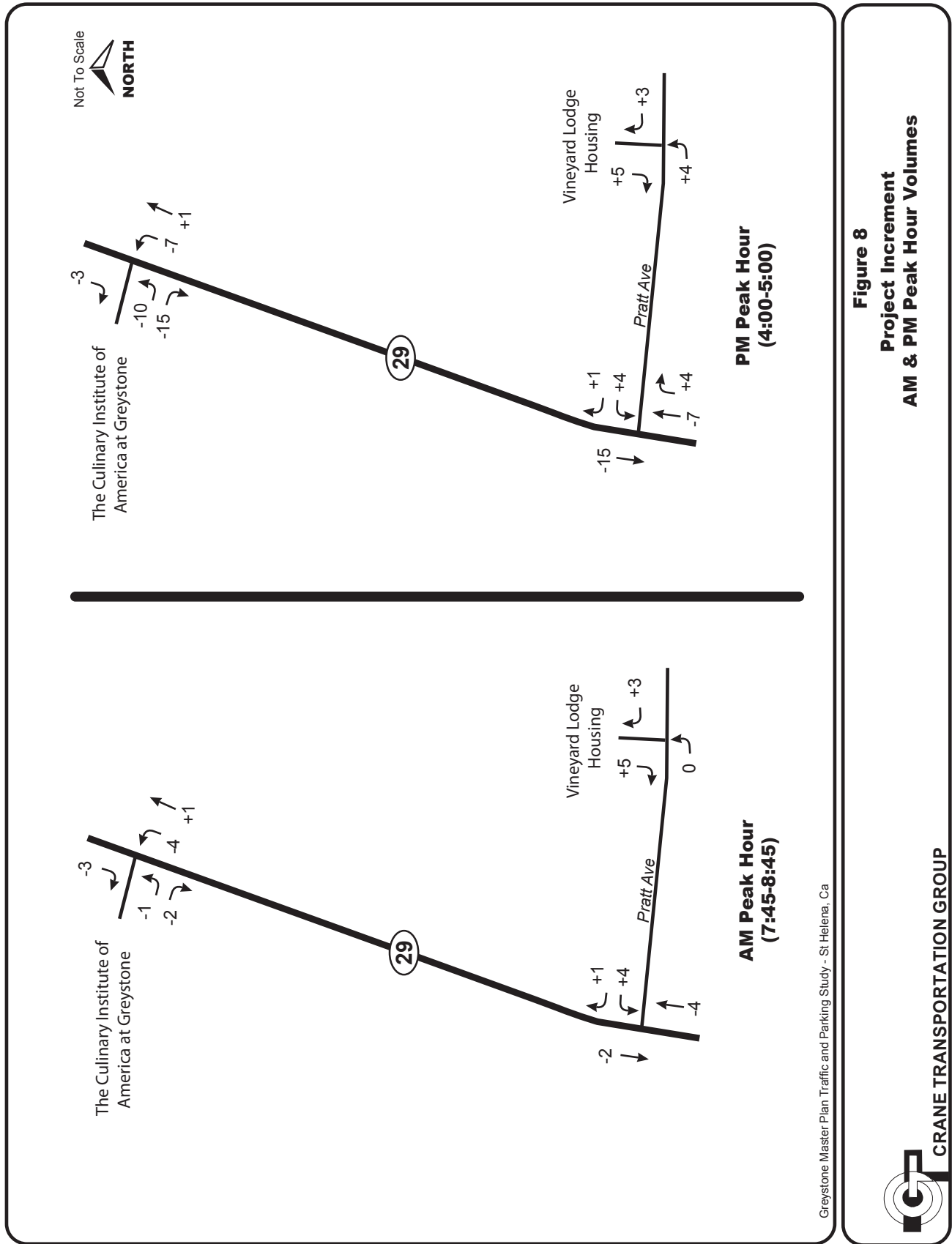


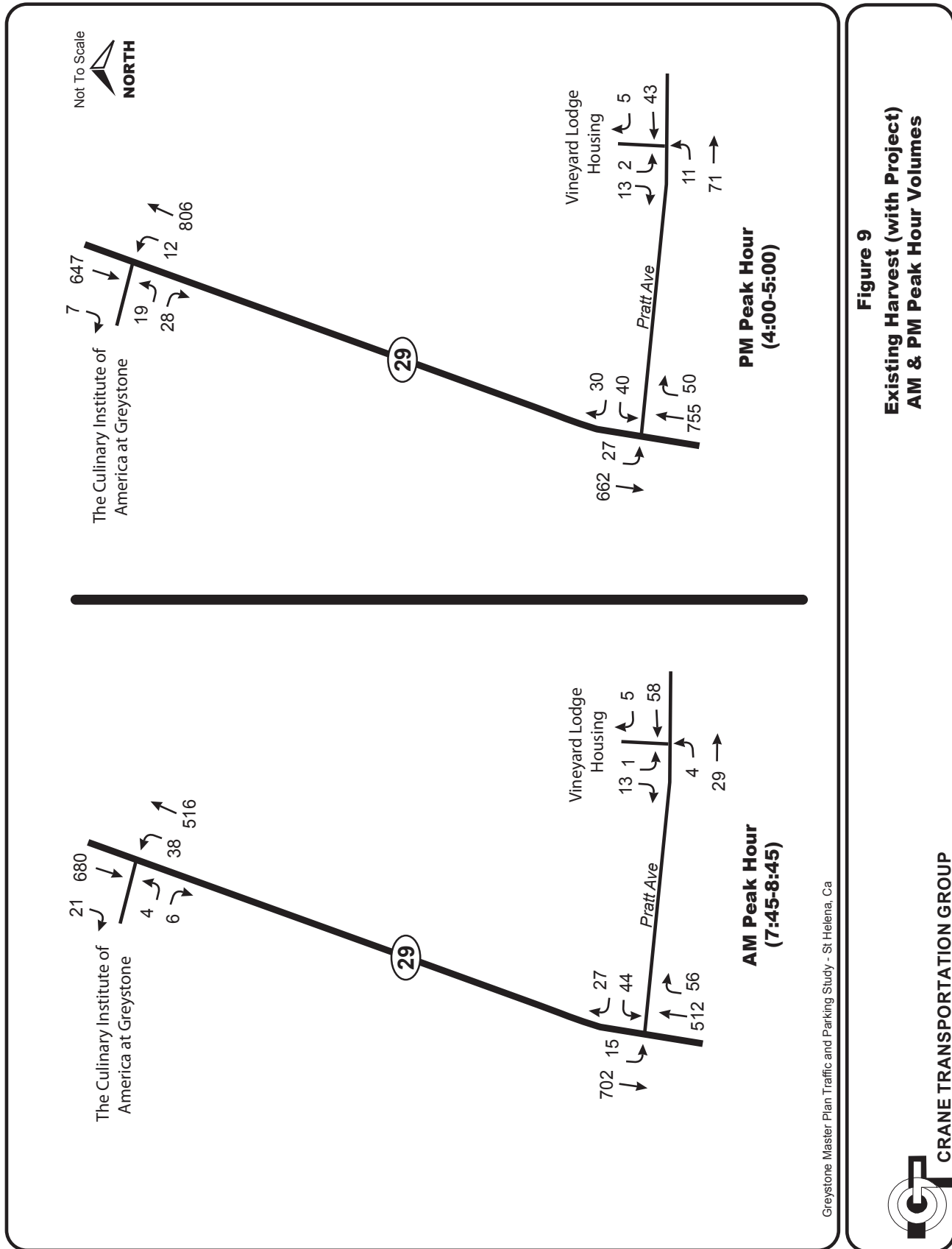


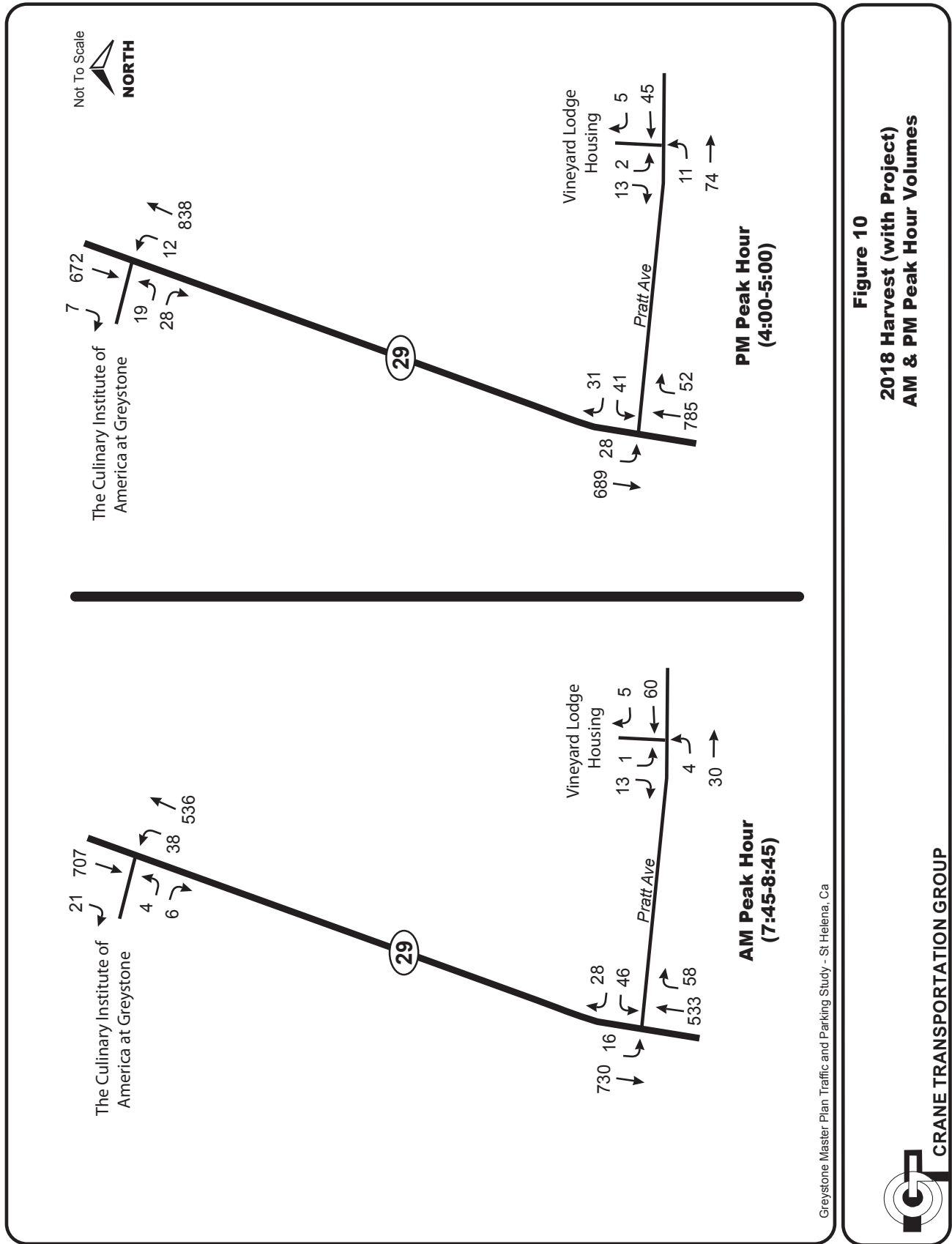


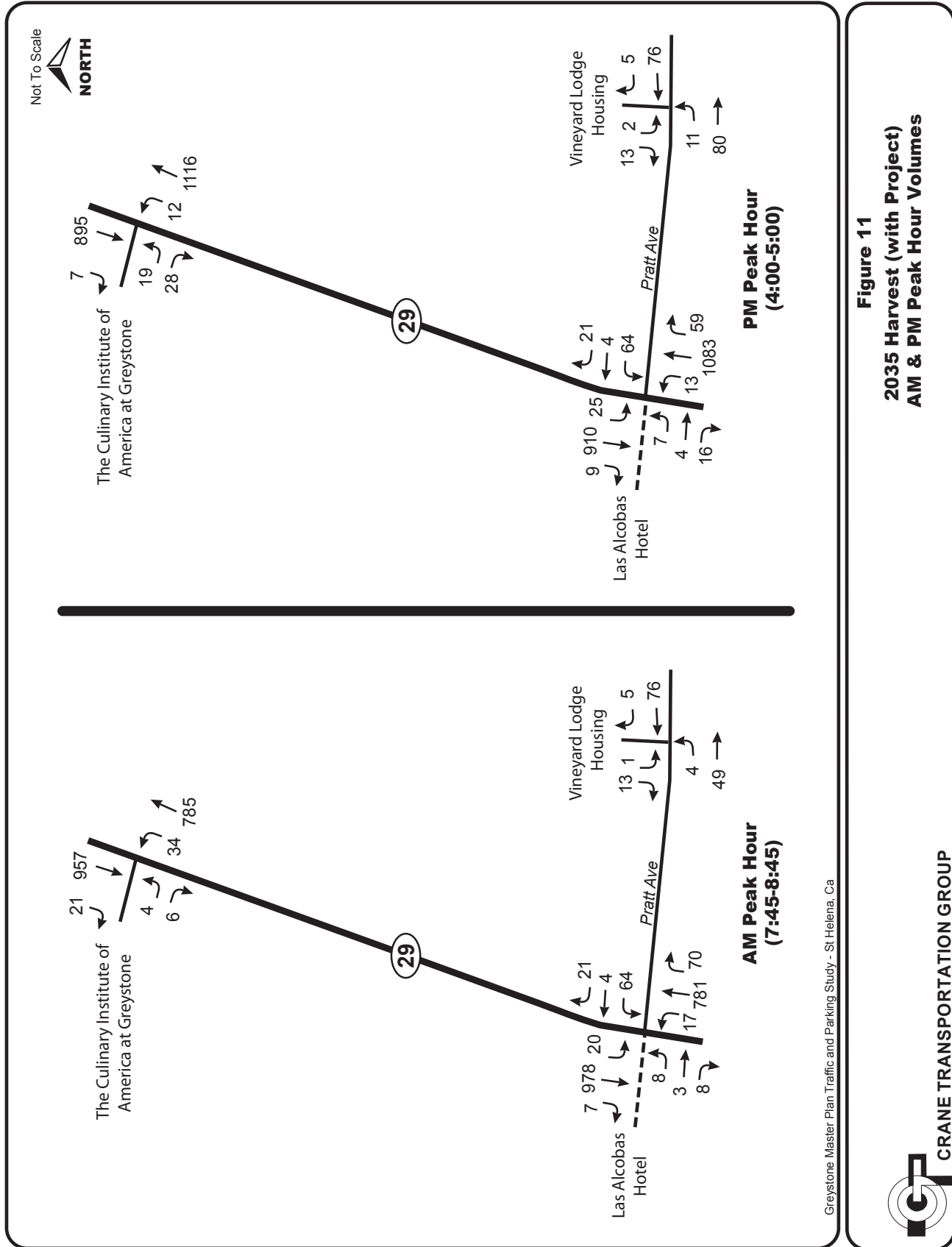












## **TABLES**

Table 1

**SIGNALIZED INTERSECTION LOS CRITERIA**

| Level of Service | Description                                                                                                                                                                                                         | Average Control Delay (Seconds Per Vehicle) |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| A                | Operations with very low delay occurring with favorable progression and/or short cycle lengths.                                                                                                                     | $\leq 10.0$                                 |
| B                | Operations with low delay occurring with good progression and/or short cycle lengths.                                                                                                                               | 10.1 to 20.0                                |
| C                | Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.                                                                              | 20.1 to 35.0                                |
| D                | Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, and/or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.    | 35.1 to 55.0                                |
| E                | Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay. | 55.1 to 80.0                                |
| F                | Operation with delays unacceptable to most drivers occurring due to oversaturation, poor progression, or very long cycle lengths.                                                                                   | $> 80.0$                                    |

Source: 2000 Highway Capacity Manual (Transportation Research Board).

Table 2

**UNSIGNALIZED INTERSECTION LOS CRITERIA**

| Level of Service | Description                                                                                                                                                                         | Average Control Delay (Seconds Per Vehicle) |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| A                | Little or no delays                                                                                                                                                                 | $\leq 10.0$                                 |
| B                | Short traffic delays                                                                                                                                                                | 10.1 to 15.0                                |
| C                | Average traffic delays                                                                                                                                                              | 15.1 to 25.0                                |
| D                | Long traffic delays                                                                                                                                                                 | 25.1 to 35.0                                |
| E                | Very long traffic delays                                                                                                                                                            | 35.1 to 50.0                                |
| F                | Extreme traffic delays with intersection capacity exceeded (for an all-way stop), or with approach/turn movement capacity exceeded (for a side street stop controlled intersection) | $> 50.0$                                    |

Source: 2000 Highway Capacity Manual (Transportation Research Board).



Table 3

**INTERSECTION LEVEL OF SERVICE****HARVEST THURSDAY AM PEAK HOUR**

| INTERSECTION                                                     | EXISTING                        | EXISTING<br>+<br>PROJECT | YEAR 2018                    |                 | YEAR 2035         |                   |
|------------------------------------------------------------------|---------------------------------|--------------------------|------------------------------|-----------------|-------------------|-------------------|
|                                                                  |                                 |                          | W/O<br>PROJECT               | WITH<br>PROJECT | W/O<br>PROJECT    | WITH<br>PROJECT   |
| CIA Driveway/<br>S.R. 29-128<br>(side street stop<br>controlled) | C-20.6/A-<br>9.4 <sup>(1)</sup> | C-19.8/A-<br>9.3         | C-21.8/A-9.6                 | C-20.9/A-9.4    | E-37.4/B-<br>10.7 | D-34.9/B-<br>10.5 |
| Pratt Avenue/<br>S.R. 29-128<br>(side street stop<br>controlled) | D-30.3 <sup>(2)</sup>           | D-30.5                   | E-35.9/F-64.0 <sup>(3)</sup> | E-35.1/F-64.9   | F-87.1/F-*        | F-83.6/F-*        |
| Pratt Avenue/<br>S.R. 29-128<br>(signalized)                     | A-5.9 <sup>(4)</sup>            | A-5.9                    | A-8.5                        | A-8.5           | B-13.0            | B-13.1            |

**HARVEST THURSDAY PM PEAK HOUR**

| INTERSECTION                                                     | EXISTING                        | EXISTING<br>+<br>PROJECT | YEAR 2018                    |                   | YEAR 2035      |                 |
|------------------------------------------------------------------|---------------------------------|--------------------------|------------------------------|-------------------|----------------|-----------------|
|                                                                  |                                 |                          | W/O<br>PROJECT               | WITH<br>PROJECT   | W/O<br>PROJECT | WITH<br>PROJECT |
| CIA Driveway/<br>S.R. 29-128<br>(side street stop<br>controlled) | D-29.3/<br>A-9.0 <sup>(1)</sup> | D-25.2/A-<br>8.9         | D-32.0/A-9.1                 | D-27.2/A-9.0      | F-82.7/A-9.9   | F-57.8/A-9.9    |
| Pratt Avenue/<br>S.R. 29-128<br>(side street stop<br>controlled) | E-39.3 <sup>(2)</sup>           | E-39.6                   | E-36.4/F-93.4 <sup>(3)</sup> | E-35.4/F-<br>94.4 | F-92.1/F-*     | F-88.3/F-*      |
| Pratt Avenue/<br>S.R. 29-128<br>(signalized)                     | A-7.5 <sup>(4)</sup>            | A-7.6                    | A-9.0                        | A-9.0             | C-21.8         | C-22.9          |

F-\* = Extreme delay (over 120 seconds).

<sup>(1)</sup> Side street stop sign controlled level of service – control delay in seconds – Eastbound CIA Driveway/SR 29-128 northbound left<sup>(2)</sup> Side street stop sign controlled level of service – control delay in seconds – Westbound Pratt Avenue<sup>(3)</sup> Side street stop sign controlled level of service – control delay in seconds – Eastbound Las Alcobas Hotel Driveway/ Westbound Pratt Avenue<sup>(4)</sup> Signalized level of service – control delay in seconds

Year 2010 Highway Capacity Manual (HCM) Analysis Methodology

Source: Crane Transportation Group

Table 4A

# **INTERSECTION 8-HOUR SIGNAL WARRANT EVALUATION**

**DO VOLUMES DURING THE 8 HIGHEST TRAFFIC  
HOURS MEET SIGNAL WARRANT #1 CRITERIA LEVELS?  
(See Urban Warrant Tables in Appendix)**

## **AM PEAK HOUR**

|                         | EXISTING       |              | 2018           |              | 2035 (1)       |              |
|-------------------------|----------------|--------------|----------------|--------------|----------------|--------------|
|                         | W/O<br>PROJECT | +<br>PROJECT | W/O<br>PROJECT | +<br>PROJECT | W/O<br>PROJECT | +<br>PROJECT |
| INTERSECTION            |                |              |                |              |                |              |
| S.R.29-128/Pratt Avenue | No             | No           | No             | No           | No             | No           |

## **PM PEAK HOUR**

|                         | EXISTING       |              | 2018           |              | 2035 (1)       |              |
|-------------------------|----------------|--------------|----------------|--------------|----------------|--------------|
|                         | W/O<br>PROJECT | +<br>PROJECT | W/O<br>PROJECT | +<br>PROJECT | W/O<br>PROJECT | +<br>PROJECT |
| INTERSECTION            |                |              |                |              |                |              |
| S.R.29-128/Pratt Avenue | No             | No           | No             | No           | No             | No           |

(1) By 2035, the warrant level is approaching being met, as volumes for 6 of the 8 hours meet the warrant criteria. See the warrant tables in the Appendix.

*Source: Crane Transportation Group*

Table 4B

# **INTERSECTION PEAK HOUR SIGNAL WARRANT EVALUATION**

## **DO PEAK HOUR VOLUMES MEET SIGNAL WARRANT #3 CRITERIA LEVELS? (See Warrant Figures in Appendix)**

### **AM PEAK HOUR**

|                         | EXISTING       |              | 2018           |              | 2035 (1)       |              |
|-------------------------|----------------|--------------|----------------|--------------|----------------|--------------|
|                         | W/O<br>PROJECT | +<br>PROJECT | W/O<br>PROJECT | +<br>PROJECT | W/O<br>PROJECT | +<br>PROJECT |
| INTERSECTION            |                |              |                |              |                |              |
| S.R.29-128/Pratt Avenue | No             | No           | No             | No           | No             | No           |

### **PM PEAK HOUR**

|                         | EXISTING       |              | 2018           |              | 2035 (1)       |              |
|-------------------------|----------------|--------------|----------------|--------------|----------------|--------------|
|                         | W/O<br>PROJECT | +<br>PROJECT | W/O<br>PROJECT | +<br>PROJECT | W/O<br>PROJECT | +<br>PROJECT |
| INTERSECTION            |                |              |                |              |                |              |
| S.R.29-128/Pratt Avenue | No             | No           | No             | No           | No             | No           |

(1) By 2035, the warrant is approaching being met. See the warrant charts in the Appendix.

Source: Crane Transportation Group

**Table 5**  
**Greystone - CIA Parking Lot Survey Thursday, May 12, 2016**

| Lot Segment      | 7:00 AM    | 8:00 AM    | 9:00 AM    | 10:00 AM   | 11:00 AM   | 12:00 noon | Spaces Per Lot Segment* |
|------------------|------------|------------|------------|------------|------------|------------|-------------------------|
| 1                | 2          | 5          | 6          | 10         | 12         | 18         | 28                      |
| 2                | 7          | 10         | 20         | 22         | 25         | 28         | 36                      |
| 3                | 15         | 20         | 26         | 30         | 27         | 35         | 39                      |
| 4                | 14         | 17         | 20         | 22         | 36         | 22         | 51                      |
| 5                | 4          | 8          | 8          | 8          | 8          | 8          | 8                       |
| 6                | 1          | 2          | 5          | 7          | 9          | 11         | 18                      |
| 7                | 1          | 2          | 7          | 9          | 11         | 15         | 18                      |
| 8                | 5          | 8          | 20         | 20         | 20         | 19         | 20                      |
| 9                | 5          | 7          | 16         | 18         | 18         | 18         | 18                      |
| 10               | 4          | 4          | 4          | 4          | 5          | 6          | 9                       |
| 11               | 0          | 1          | 1          | 1          | 2          | 2          | 4                       |
| 12               | 8          | 9          | 6          | 8          | 8          | 9          | 23                      |
| Total            | 66         | 93         | 139        | 159        | 181        | 191        | <b>265</b>              |
| Available Spaces | <b>199</b> | <b>172</b> | <b>126</b> | <b>106</b> | <b>84</b>  | <b>74</b>  |                         |
| Lot Segment      | 2:00 PM    | 3:00 PM    | 4:00 PM    | 5:00 PM    | 6:00 PM    |            | Spaces Per Lot Segment* |
| 1                | 20         | 14         | 12         | 10         | 10         |            | 28                      |
| 2                | 31         | 30         | 30         | 24         | 19         |            | 36                      |
| 3                | 37         | 16         | 15         | 27         | 23         |            | 39                      |
| 4                | 29         | 39         | 41         | 34         | 32         |            | 51                      |
| 5                | 9          | 8          | 7          | 8          | 6          |            | 8                       |
| 6                | 12         | 12         | 13         | 8          | 4          |            | 18                      |
| 7                | 18         | 17         | 17         | 15         | 8          |            | 18                      |
| 8                | 19         | 15         | 14         | 11         | 6          |            | 20                      |
| 9                | 19         | 20         | 15         | 8          | 4          |            | 18                      |
| 10               | 6          | 6          | 4          | 5          | 5          |            | 9                       |
| 11               | 3          | 2          | 2          | 0          | 0          |            | 4                       |
| 12               | 5          | 9          | 8          | 7          | 8          |            | 23                      |
| Total            | 208        | 188        | 178        | 157        | 125        |            | <b>265</b>              |
| Available Spaces | <b>57</b>  | <b>77</b>  | <b>87</b>  | <b>108</b> | <b>140</b> |            |                         |

**Table 6**  
**Greystone - CIA Parking Lot Survey - Saturday May 14, 2016**

| Lot Segment      | 1:00 PM | 2:00 PM | 3:00 PM | 4:00 PM | 5:00 pm | 6:00 PM | Total Parking Spaces Per Lot Segment* |
|------------------|---------|---------|---------|---------|---------|---------|---------------------------------------|
| 1                | 16      | 20      | 21      | 12      | 19      | 22      | 28                                    |
| 2                | 29      | 34      | 32      | 32      | 34      | 33      | 36                                    |
| 3                | 34      | 26      | 25      | 26      | 23      | 26      | 39                                    |
| 4                | 34      | 35      | 30      | 29      | 27      | 30      | 51                                    |
| 5                | 6       | 8       | 7       | 8       | 8       | 8       | 8                                     |
| 6                | 0       | 1       | 0       | 0       | 3       | 5       | 18                                    |
| 7                | 9       | 9       | 5       | 4       | 6       | 7       | 18                                    |
| 8                | 0       | 4       | 9       | 8       | 8       | 6       | 20                                    |
| 9                | 5       | 5       | 6       | 7       | 8       | 8       | 18                                    |
| 10               | 4       | 4       | 4       | 3       | 3       | 4       | 9                                     |
| 11               | 0       | 0       | 0       | 0       | 0       | 0       | 4                                     |
| 12               | 5       | 8       | 6       | 6       | 7       | 7       | 23                                    |
| Total            | 142     | 154     | 145     | 135     | 146     | 156     | 265                                   |
| Available Spaces | 123     | 111     | 120     | 130     | 115     | 109     |                                       |

Table 7

**CULINARY INSTITUTE OF AMERICA  
EXISTING WEEKDAY PARKING DEMAND AT CIA CAMPUS (EDUCATION & TOURIST PEAK SEASON)  
(WITHOUT MASTER PLAN)**

|                                        | 6:00-<br>7:00 | 7:00-<br>8:00 | 8:00-<br>9:00 | 9:00-<br>10:00 | 10:00-<br>11:00 | 11:00-<br>Noon | Noon-<br>1:00 | 1:00-<br>2:00 | 2:00-<br>3:00 | 3:00-<br>4:00 | 4:00-<br>5:00 | 5:00-<br>6:00 | 6:00-<br>7:00 | 7:00-<br>8:00 | 8:00-<br>9:00 | 9:00-<br>10:00 | 10:00-<br>11:00 | 11:00-<br>Mid<br>night |
|----------------------------------------|---------------|---------------|---------------|----------------|-----------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|-----------------|------------------------|
| Admin Staff                            |               | 5             | 10            | 10             | 10              | 10             | 10            | 10            | 10            | 10            | 10            | 5             |               |               |               |                |                 |                        |
| Education Staff                        | 15            | 15            | 15            | 15             | 15              | 15             | 15            | 15            | 15            | 15            | 15            | 15            | 15            | 15            | 15            |                |                 |                        |
| SIG Program &<br>Purchasing staff      | 2             | 2             | 20            | 20             | 20              | 20             | 20            | 20            | 20            | 20            | 20            |               |               |               |               |                |                 |                        |
| Pub Ops/SE                             |               |               |               | 8              | 8               | 8              | 8             | 8             | 8             | 8             | 8             | 8             | 8             |               |               |                |                 |                        |
| Campus Store &<br>Café Staff           |               |               |               | 7              | 7               | 7              | 7             | 7             | 7             | 7             | 7             | 7             | 7             |               |               |                |                 |                        |
| Restaurant Staff<br>Shift 1<br>Shift 2 |               |               |               | 10             | 10              | 10             | 10            | 10            | 10            | 10            | 10            | 10            | 10            | 10            | 10            | 10             | 10              | 10                     |
| Teachers                               | 28            | 28            | 28            | 28             | 28              | 28             | 28            | 28            | 28            | 28            | 28            | 28            | 28            | 28            | 28            | 1              |                 |                        |
| AOS Students                           |               | 53(1)         | 53            | 53             | 53              | 53             | 53            | 53            | 41            | 41            | 41            | 41            | 41            | 41            | 41            |                |                 |                        |
| Continuing Ed & Food<br>Enthusiast     |               | 28(2)         | 28            | 28             | 28              | 28             | 28            | 28            | 28            | 28            | 28            | 28            | 28            | 28            | 28            |                |                 |                        |
| Restaurant Patrons (3)                 |               |               |               |                |                 | 35             | 35            | 35            | 35            | 35            | 35            | 35            | 35            | 35            | 35            | 10             | 10              |                        |
| Tourists                               |               |               |               | 10             | 10              | 15             | 15            | 15            | 15            | 15            | 15            | 5             | 5             |               |               |                |                 |                        |
| De Baun Theater                        |               |               |               |                |                 |                | 5             | 5             | 5             | 5             | 5             |               |               |               |               |                |                 |                        |
| Maintenance, Repair and<br>Janitorial  | 15            | 15            | 15            | 15             | 15              | 15             | 15            | 15            | 15            | 15            | 15            | 15            | 15            | 15            | 10            | 10             |                 |                        |
| Trades People/<br>Sales People         |               |               | 1             | 1              | 1               |                |               | 1             | 1             | 1             | 1             |               |               |               |               |                |                 |                        |
| <b>TOTAL</b>                           | <b>60</b>     | <b>146</b>    | <b>170</b>    | <b>205</b>     | <b>205</b>      | <b>244</b>     | <b>249</b>    | <b>250</b>    | <b>238</b>    | <b>248</b>    | <b>248</b>    | <b>207</b>    | <b>202</b>    | <b>172</b>    | <b>167</b>    | <b>31</b>      | <b>20</b>       | <b>10</b>              |

**BOLD** type indicates maximum parking demand.

(1) 45 students now staying in dorms on CIA campus, 70% of these students have cars. Also project that 85% of students living off-site, and not at Vineyard Lodge housing, drive to/from campus on a 70/30 split AM/PM.

(2) 42 @ 1.5 per car.

(3) 70 patrons @ 2.0 per car

Source: Crane Transportation Group based upon input from Culinary Institute of America

**Table 8**

**CULINARY INSTITUTE OF AMERICA  
EXISTING SATURDAY PARKING DEMAND AT CIA CAMPUS (EDUCATION & TOURIST PEAK SEASON)  
(WITHOUT MASTER PLAN)**

|                                    | 6:00-7:00 | 7:00-8:00 | 8:00-9:00 | 9:00-10:00 | 10:00-11:00 | 11:00-Noon | Noon-1:00  | 1:00-2:00  | 2:00-3:00  | 3:00-4:00  | 4:00-5:00  | 5:00-6:00  | 6:00-7:00  | 7:00-8:00  | 8:00-9:00  | 9:00-10:00 | 10:00-11:00 | 11:00-Mid night |
|------------------------------------|-----------|-----------|-----------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|-----------------|
| Admin Staff                        |           |           |           |            |             |            |            |            |            |            |            |            |            |            |            |            |             |                 |
| Education Staff                    |           |           |           |            |             |            |            |            |            |            |            |            |            |            |            |            |             |                 |
| Purchasing staff                   |           |           |           |            |             |            |            |            |            |            |            |            |            |            |            |            |             |                 |
| Pub Ops/SE                         |           |           |           | 6          | 6           | 6          | 6          | 6          | 6          | 6          | 6          | 6          | 6          |            |            |            |             |                 |
| Campus Store & Café Staff          |           |           |           | 8          | 8           | 8          | 8          | 8          | 8          | 8          | 8          | 8          | 8          |            |            |            |             |                 |
| Restaurant Staff Shift 1           |           |           |           | 10         | 10          | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         |            |            |            |             |                 |
| Teachers                           | 3         | 3         | 3         | 3          | 3           | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 1          |             |                 |
| Degree & Certificate Students      |           | 14 (1)    | 14        | 14         | 14          | 14         | 14         | 14         | 6          | 6          | 6          | 6          | 6          | 6          | 6          |            |             |                 |
| Continuing Ed & Food Enthusiast    |           | 40 (2)    | 40        | 40         | 40          | 40         | 40         | 40         | 40         | 40         | 40         | 40         | 40         | 40         | 40         |            |             |                 |
| Restaurant Patrons (3)             |           |           |           |            |             | 40         | 40         | 40         | 40         | 40         | 40         | 40         | 40         | 40         | 40         | 5          | 5           |                 |
| Tourists                           |           |           |           | 10         | 10          | 15         | 15         | 15         | 15         | 15         | 15         | 5          | 5          |            |            |            |             |                 |
| De Baun Theater                    |           |           |           |            |             |            | 5          | 5          | 5          | 5          | 5          |            |            |            |            |            |             |                 |
| Maintenance, Repair and Janitorial | 15        | 15        | 15        | 15         | 15          | 15         | 15         | 15         | 15         | 15         | 15         | 15         | 15         | 15         | 10         | 10         |             |                 |
| Trades People/<br>Sales People     |           |           | 1         | 1          | 1           |            | 1          | 1          | 1          | 1          | 1          |            |            |            |            |            |             |                 |
| <b>TOTAL</b>                       | <b>18</b> | <b>72</b> | <b>73</b> | <b>107</b> | <b>107</b>  | <b>151</b> | <b>157</b> | <b>157</b> | <b>149</b> | <b>149</b> | <b>149</b> | <b>133</b> | <b>133</b> | <b>104</b> | <b>104</b> | <b>16</b>  | <b>5</b>    |                 |

**BOLD** type indicates maximum parking demand.

(1) 24 students - 85% of students living off-site, and not at Vineyard Lodge housing, drive to/from campus on a 70/30 split AM/PM.

(2) 60 @ 1.5 per car.

(3) 80 patrons @ 2.0 per car

Source: Crane Transportation Group based upon input from Culinary Institute of America



**Table 9**

**CULINARY INSTITUTE OF AMERICA  
EXISTING WEEKDAY PARKING DEMAND AT CIA CAMPUS (EDUCATION & TOURIST PEAK SEASON)  
(WITH MASTER PLAN)**

|                                        | 6:00-7:00 | 7:00-8:00  | 8:00-9:00  | 9:00-10:00 | 10:00-11:00 | 11:00-Noon | Noon-1:00  | 1:00-2:00  | 2:00-3:00  | 3:00-4:00  | 4:00-5:00  | 5:00-6:00  | 6:00-7:00  | 7:00-8:00  | 8:00-9:00  | 9:00-10:00 | 10:00-11:00 | 11:00-Mid night |
|----------------------------------------|-----------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|-----------------|
| Admin Staff                            |           | 1          | 5          | 5          | 5           | 5          | 5          | 5          | 5          | 5          | 5          | 1          |            |            |            |            |             |                 |
| Education Staff                        | 15        | 15         | 15         | 15         | 15          | 15         | 15         | 15         | 15         | 15         | 15         | 15         | 15         | 15         | 15         |            |             |                 |
| Purchasing staff                       | 1         | 1          | 5          | 5          | 5           | 5          | 5          | 5          | 5          | 5          | 5          |            |            |            |            |            |             |                 |
| Pub Ops/SE                             |           |            |            | 8          | 8           | 8          | 8          | 8          | 8          | 8          | 8          | 8          | 8          |            |            |            |             |                 |
| Campus Store & Café Staff              |           |            |            | 7          | 7           | 7          | 7          | 7          | 7          | 7          | 7          | 7          | 7          |            |            |            |             |                 |
| Restaurant Staff<br>Shift 1<br>Shift 2 |           |            |            | 10         | 10          | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         |            |            |            |             |                 |
| Teachers                               | 28        | 28         | 28         | 28         | 28          | 28         | 28         | 28         | 28         | 28         | 28         | 28         | 28         | 28         | 28         | 1          |             |                 |
| AOS Students                           |           | 53(1)      | 53         | 53         | 53          | 53         | 53         | 53         | 41         | 41         | 41         | 41         | 41         | 41         | 41         |            |             |                 |
| Continuing Ed & Food Enthusiast        |           | 11(2)      | 11         | 11         | 11          | 11         | 11         | 11         | 11         | 11         | 11         | 11         | 11         | 11         | 11         |            |             |                 |
| Restaurant Patrons (3)                 |           |            |            |            |             | 18         | 18         | 18         | 18         | 18         | 18         | 18         | 18         | 18         | 18         | 5          | 5           |                 |
| Tourists                               |           |            |            | 5          | 5           | 10         | 10         | 10         | 10         | 10         | 10         | 2          | 2          |            |            |            |             |                 |
| De Baun Theater                        |           |            |            |            |             |            | 5          | 5          | 5          | 5          | 5          |            |            |            |            |            |             |                 |
| Maintenance, Repair and Janitorial     | 15        | 15         | 15         | 15         | 15          | 15         | 15         | 15         | 15         | 15         | 15         | 15         | 15         | 15         | 10         | 10         |             |                 |
| Trades People/<br>Sales People         |           |            | 1          | 1          | 1           |            |            | 1          | 1          | 1          | 1          |            |            |            |            |            |             |                 |
| <b>TOTAL</b>                           | <b>59</b> | <b>124</b> | <b>133</b> | <b>163</b> | <b>163</b>  | <b>185</b> | <b>190</b> | <b>191</b> | <b>179</b> | <b>179</b> | <b>179</b> | <b>156</b> | <b>155</b> | <b>128</b> | <b>123</b> | <b>16</b>  | <b>5</b>    |                 |

**BOLD** type indicates maximum parking demand.

(1) 45 students now staying in dorms on CIA campus, 70% of these students have cars. Also project that 85% of students living off-site, and not at Vineyard Lodge housing, drive to/from campus on a 70/30 split AM/PM.

(2) 16 @ 1.5 per car.

(3) 35 patrons @ 2.0 per car

Source: Crane Transportation Group based upon input from Culinary Institute of America

**Table 10**

**CULINARY INSTITUTE OF AMERICA  
EXISTING SATURDAY PARKING DEMAND AT CIA CAMPUS (EDUCATION & TOURIST PEAK SEASON)  
(WITH MASTER PLAN)**

|                                       | 6:00-<br>7:00 | 7:00-<br>8:00 | 8:00-<br>9:00 | 9:00-<br>10:00 | 10:00-<br>11:00 | 11:00-<br>Noon | Noon-<br>1:00 | 1:00-<br>2:00 | 2:00-<br>3:00 | 3:00-<br>4:00 | 4:00-<br>5:00 | 5:00-<br>6:00 | 6:00-<br>7:00 | 7:00-<br>8:00 | 8:00-<br>9:00 | 9:00-<br>10:00 | 10:00-<br>11:00 | 11:00-<br>Mid<br>night |
|---------------------------------------|---------------|---------------|---------------|----------------|-----------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|-----------------|------------------------|
| Admin Staff                           |               |               |               |                |                 |                |               |               |               |               |               |               |               |               |               |                |                 |                        |
| Education Staff                       |               |               |               |                |                 |                |               |               |               |               |               |               |               |               |               |                |                 |                        |
| Purchasing staff                      |               |               |               |                |                 |                |               |               |               |               |               |               |               |               |               |                |                 |                        |
| Pub Ops/SE                            |               |               |               | 6              | 6               | 6              | 6             | 6             | 6             | 6             | 6             | 6             | 6             |               |               |                |                 |                        |
| Campus Store &<br>Café Staff          |               |               |               | 8              | 8               | 8              | 8             | 8             | 8             | 8             | 8             | 8             | 8             |               |               |                |                 |                        |
| Restaurant Staff<br>Shift 1           |               |               |               | 10             | 10              | 10             | 10            | 10            | 10            | 10            | 10            | 10            | 10            |               |               |                |                 |                        |
| Teachers                              | 3             | 3             | 3             | 3              | 3               | 3              | 3             | 3             | 3             | 3             | 3             | 3             | 3             | 3             | 3             | 1              |                 |                        |
| AOS Students                          |               | 14            | 14            | 14             | 14              | 14             | 14            | 14            | 6             | 6             | 6             | 6             | 6             | 6             | 6             |                |                 |                        |
| Continuing Ed & Food<br>Enthusiast    |               | 20            | 20            | 20             | 20              | 20             | 20            | 20            | 20            | 20            | 20            | 20            | 20            | 20            | 20            |                |                 |                        |
| Restaurant Patrons (3)                |               |               |               |                |                 | 20             | 20            | 20            | 20            | 20            | 20            | 20            | 20            | 20            | 20            | 5              | 5               |                        |
| Tourists                              |               |               |               | 5              | 5               | 10             | 10            | 10            | 10            | 10            | 10            | 2             | 2             |               |               |                |                 |                        |
| De Baun Theater                       |               |               |               |                |                 |                | 5             | 5             | 5             | 5             | 5             |               |               |               |               |                |                 |                        |
| Maintenance, Repair and<br>Janitorial | 3             | 3             | 3             | 3              | 3               | 3              | 3             | 3             | 3             | 3             | 3             | 3             | 3             | 3             | 3             | 3              |                 |                        |
| Trades People/<br>Sales People        |               |               | 1             | 1              | 1               |                | 1             | 1             | 1             | 1             | 1             |               |               |               |               |                |                 |                        |
| <b>TOTAL</b>                          | <b>6</b>      | <b>40</b>     | <b>41</b>     | <b>70</b>      | <b>70</b>       | <b>89</b>      | <b>100</b>    | <b>100</b>    | <b>92</b>     | <b>92</b>     | <b>92</b>     | <b>78</b>     | <b>78</b>     | <b>52</b>     | <b>52</b>     | <b>9</b>       | <b>5</b>        |                        |

**BOLD** type indicates maximum parking demand.

(1) 24 students now staying in dorms on CIA campus, 70% of these students have cars. Also project that 85% of students living off-site, and not at Vineyard Lodge housing, drive to/from campus on a 70/30 split AM/PM.

(2) 30 @ 1.5 per car.

(3) 40 patrons @ 2.0 per car

Source: Crane Transportation Group based upon input from Culinary Institute of America

## **APPENDIX**

## **INTERSECTION LEVEL OF SERVICE (LOS) WORKSHEETS**

HCM 2010 TWSC  
2: SR29 & Greystone

25/10/2016

| Intersection             |        |        |       |        |      |      |  |
|--------------------------|--------|--------|-------|--------|------|------|--|
| Int Delay, s/veh         | 0.5    |        |       |        |      |      |  |
| Movement                 | EBL    | EBR    | NBL   | NBT    | SBT  | SBR  |  |
| Vol, veh/h               | 5      | 8      | 42    | 515    | 680  | 24   |  |
| Conflicting Peds, #/hr   | 0      | 0      | 0     | 0      | 0    | 0    |  |
| Sign Control             | Stop   | Stop   | Free  | Free   | Free | Free |  |
| RT Channelized           | -      | None   | -     | None   | -    | None |  |
| Storage Length           | 0      | -      | 170   | -      | -    | -    |  |
| Veh in Median Storage, # | 0      | -      | -     | 0      | 0    | -    |  |
| Grade, %                 | 0      | -      | -     | 0      | 0    | -    |  |
| Peak Hour Factor         | 92     | 92     | 92    | 92     | 92   | 92   |  |
| Heavy Vehicles, %        | 0      | 0      | 0     | 8      | 6    | 0    |  |
| Mvmt Flow                | 5      | 9      | 46    | 560    | 739  | 26   |  |
| Major/Minor              | Minor2 | Major1 |       | Major2 |      |      |  |
| Conflicting Flow All     | 1403   | 752    | 765   | 0      | -    | 0    |  |
| Stage 1                  | 752    | -      | -     | -      | -    | -    |  |
| Stage 2                  | 651    | -      | -     | -      | -    | -    |  |
| Critical Hdwy            | 6.4    | 6.2    | 4.1   | -      | -    | -    |  |
| Critical Hdwy Stg 1      | 5.4    | -      | -     | -      | -    | -    |  |
| Critical Hdwy Stg 2      | 5.4    | -      | -     | -      | -    | -    |  |
| Follow-up Hdwy           | 3.5    | 3.3    | 2.2   | -      | -    | -    |  |
| Pot Cap-1 Maneuver       | 156    | 413    | 857   | -      | -    | -    |  |
| Stage 1                  | 469    | -      | -     | -      | -    | -    |  |
| Stage 2                  | 523    | -      | -     | -      | -    | -    |  |
| Platoon blocked, %       |        |        |       | -      | -    | -    |  |
| Mov Cap-1 Maneuver       | 148    | 413    | 857   | -      | -    | -    |  |
| Mov Cap-2 Maneuver       | 148    | -      | -     | -      | -    | -    |  |
| Stage 1                  | 469    | -      | -     | -      | -    | -    |  |
| Stage 2                  | 495    | -      | -     | -      | -    | -    |  |
| Approach                 | EB     | NB     |       | SB     |      |      |  |
| HCM Control Delay, s     | 20.6   | 0.7    |       | 0      |      |      |  |
| HCM LOS                  | C      |        |       |        |      |      |  |
| Minor Lane/Major Mvmt    | NBL    | NB     | EBLn1 | SBT    | SBR  |      |  |
| Capacity (veh/h)         | 857    | -      | 245   | -      | -    |      |  |
| HCM Lane V/C Ratio       | 0.053  | -      | 0.058 | -      | -    |      |  |
| HCM Control Delay (s)    | 9.4    | -      | 20.6  | -      | -    |      |  |
| HCM Lane LOS             | A      | -      | C     | -      | -    |      |  |
| HCM 95th %tile Q(veh)    | 0.2    | -      | 0.2   | -      | -    |      |  |

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| Intersection             |        |        |        |      |        |      |
|--------------------------|--------|--------|--------|------|--------|------|
| Int Delay, s/veh         | 1.6    |        |        |      |        |      |
| Movement                 | WBL    | WBR    | NBT    | NBR  | SBL    | SBT  |
| Vol, veh/h               | 40     | 26     | 516    | 56   | 15     | 704  |
| Conflicting Peds, #/hr   | 5      | 5      | 0      | 0    | 0      | 0    |
| Sign Control             | Stop   | Stop   | Free   | Free | Free   | Free |
| RT Channelized           | -      | None   | -      | None | -      | None |
| Storage Length           | 0      | -      | -      | -    | 70     | -    |
| Veh in Median Storage, # | 0      | -      | 0      | -    | -      | 0    |
| Grade, %                 | 0      | -      | 0      | -    | -      | 0    |
| Peak Hour Factor         | 92     | 92     | 92     | 92   | 92     | 92   |
| Heavy Vehicles, %        | 0      | 0      | 8      | 0    | 0      | 6    |
| Mvmt Flow                | 43     | 28     | 561    | 61   | 16     | 765  |
| Major/Minor              | Minor1 |        | Major1 |      | Major2 |      |
| Conflicting Flow All     | 1394   | 596    | 0      | 0    | 627    | 0    |
| Stage 1                  | 596    | -      | -      | -    | -      | -    |
| Stage 2                  | 798    | -      | -      | -    | -      | -    |
| Critical Hdwy            | 6.4    | 6.2    | -      | -    | 4.1    | -    |
| Critical Hdwy Stg 1      | 5.4    | -      | -      | -    | -      | -    |
| Critical Hdwy Stg 2      | 5.4    | -      | -      | -    | -      | -    |
| Follow-up Hdwy           | 3.5    | 3.3    | -      | -    | 2.2    | -    |
| Pot Cap-1 Maneuver       | 158    | 507    | -      | -    | 965    | -    |
| Stage 1                  | 554    | -      | -      | -    | -      | -    |
| Stage 2                  | 447    | -      | -      | -    | -      | -    |
| Platoon blocked, %       |        |        | -      | -    |        | -    |
| Mov Cap-1 Maneuver       | 155    | 505    | -      | -    | 965    | -    |
| Mov Cap-2 Maneuver       | 155    | -      | -      | -    | -      | -    |
| Stage 1                  | 552    | -      | -      | -    | -      | -    |
| Stage 2                  | 440    | -      | -      | -    | -      | -    |
| Approach                 | WB     |        | NB     |      | SB     |      |
| HCM Control Delay, s     | 30.3   |        | 0      |      | 0.2    |      |
| HCM LOS                  | D      |        |        |      |        |      |
| Minor Lane/Major Mvmt    | NBT    | NBLn1  | SBL    | SBT  |        |      |
| Capacity (veh/h)         | -      | - 213  | 965    | -    |        |      |
| HCM Lane V/C Ratio       | -      | -0.337 | 0.017  | -    |        |      |
| HCM Control Delay (s)    | -      | - 30.3 | 8.8    | -    |        |      |
| HCM Lane LOS             | -      | - D    | A      | -    |        |      |
| HCM 95th %tile Q(veh)    | -      | - 1.4  | 0.1    | -    |        |      |

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|                                                                    |  |  |  |  |  |  |   |      |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---|------|
| Movement                                                           | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |   |      |
| Lane Configurations                                                |  |                                                                                   |  |                                                                                   |  |  |   |      |
| Volume (veh/h)                                                     | 40                                                                                | 26                                                                                | 516                                                                               | 56                                                                                | 15                                                                                | 704                                                                               |   |      |
| Number                                                             | 3                                                                                 | 18                                                                                | 2                                                                                 | 12                                                                                | 1                                                                                 | 6                                                                                 |   |      |
| Initial Q (Qb), veh                                                | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 |   |      |
| Ped-Bike Adj(A_pbT)                                                | 1.00                                                                              | 0.95                                                                              |                                                                                   | 0.98                                                                              | 1.00                                                                              |                                                                                   |   |      |
| Parking Bus, Adj                                                   | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |   |      |
| Adj Sat Flow, veh/h/ln                                             | 1900                                                                              | 1900                                                                              | 1772                                                                              | 1900                                                                              | 1900                                                                              | 1792                                                                              |   |      |
| Adj Flow Rate, veh/h                                               | 43                                                                                | 28                                                                                | 561                                                                               | 61                                                                                | 16                                                                                | 765                                                                               |   |      |
| Adj No. of Lanes                                                   | 0                                                                                 | 0                                                                                 | 1                                                                                 | 0                                                                                 | 1                                                                                 | 1                                                                                 |   |      |
| Peak Hour Factor                                                   | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              |   |      |
| Percent Heavy Veh, %                                               | 0                                                                                 | 0                                                                                 | 8                                                                                 | 8                                                                                 | 0                                                                                 | 6                                                                                 |   |      |
| Cap, veh/h                                                         | 68                                                                                | 44                                                                                | 797                                                                               | 87                                                                                | 30                                                                                | 1185                                                                              |   |      |
| Arrive On Green                                                    | 0.07                                                                              | 0.07                                                                              | 0.51                                                                              | 0.51                                                                              | 0.02                                                                              | 0.66                                                                              |   |      |
| Sat Flow, veh/h                                                    | 1010                                                                              | 658                                                                               | 1567                                                                              | 170                                                                               | 1810                                                                              | 1792                                                                              |   |      |
| Grp Volume(v), veh/h                                               | 72                                                                                | 0                                                                                 | 0                                                                                 | 622                                                                               | 16                                                                                | 765                                                                               |   |      |
| Grp Sat Flow(s),veh/h/ln                                           | 1691                                                                              | 0                                                                                 | 0                                                                                 | 1737                                                                              | 1810                                                                              | 1792                                                                              |   |      |
| Q Serve(g_s), s                                                    | 1.2                                                                               | 0.0                                                                               | 0.0                                                                               | 8.1                                                                               | 0.3                                                                               | 7.4                                                                               |   |      |
| Cycle Q Clear(g_c), s                                              | 1.2                                                                               | 0.0                                                                               | 0.0                                                                               | 8.1                                                                               | 0.3                                                                               | 7.4                                                                               |   |      |
| Prop In Lane                                                       | 0.60                                                                              | 0.39                                                                              |                                                                                   | 0.10                                                                              | 1.00                                                                              |                                                                                   |   |      |
| Lane Grp Cap(c), veh/h                                             | 113                                                                               | 0                                                                                 | 0                                                                                 | 883                                                                               | 30                                                                                | 1185                                                                              |   |      |
| V/C Ratio(X)                                                       | 0.64                                                                              | 0.00                                                                              | 0.00                                                                              | 0.70                                                                              | 0.53                                                                              | 0.65                                                                              |   |      |
| Avail Cap(c_a), veh/h                                              | 633                                                                               | 0                                                                                 | 0                                                                                 | 1358                                                                              | 246                                                                               | 1889                                                                              |   |      |
| HCM Platoon Ratio                                                  | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |   |      |
| Upstream Filter(I)                                                 | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |   |      |
| Uniform Delay (d), s/veh                                           | 13.4                                                                              | 0.0                                                                               | 0.0                                                                               | 5.5                                                                               | 14.3                                                                              | 2.9                                                                               |   |      |
| Incr Delay (d2), s/veh                                             | 5.8                                                                               | 0.0                                                                               | 0.0                                                                               | 1.0                                                                               | 13.7                                                                              | 0.6                                                                               |   |      |
| Initial Q Delay(d3),s/veh                                          | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |   |      |
| %ile BackOfQ(50%),veh/ln                                           | 0.7                                                                               | 0.0                                                                               | 0.0                                                                               | 4.1                                                                               | 0.2                                                                               | 3.6                                                                               |   |      |
| LnGrp Delay(d),s/veh                                               | 19.2                                                                              | 0.0                                                                               | 0.0                                                                               | 6.6                                                                               | 28.0                                                                              | 3.5                                                                               |   |      |
| LnGrp LOS                                                          | B                                                                                 |                                                                                   |                                                                                   | A                                                                                 | C                                                                                 | A                                                                                 |   |      |
| Approach Vol, veh/h                                                | 72                                                                                |                                                                                   | 622                                                                               |                                                                                   |                                                                                   | 781                                                                               |   |      |
| Approach Delay, s/veh                                              | 19.2                                                                              |                                                                                   | 6.6                                                                               |                                                                                   |                                                                                   | 4.0                                                                               |   |      |
| Approach LOS                                                       | B                                                                                 |                                                                                   | A                                                                                 |                                                                                   |                                                                                   | A                                                                                 |   |      |
| Timer                                                              | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7 | 8    |
| Assigned Phs                                                       | 1                                                                                 | 2                                                                                 |                                                                                   |                                                                                   |                                                                                   | 6                                                                                 |   | 8    |
| Phs Duration (G+Y+Rc), s                                           | 4.5                                                                               | 19.0                                                                              |                                                                                   |                                                                                   |                                                                                   | 23.4                                                                              |   | 6.0  |
| Change Period (Y+Rc), s                                            | 4.0                                                                               | 4.0                                                                               |                                                                                   |                                                                                   |                                                                                   | 4.0                                                                               |   | 4.0  |
| Max Green Setting (Gmax),s                                         | 4.0                                                                               | 23.0                                                                              |                                                                                   |                                                                                   |                                                                                   | 31.0                                                                              |   | 11.0 |
| Max Q Clear Time (g_c+I1),s                                        | 2.8                                                                               | 10.1                                                                              |                                                                                   |                                                                                   |                                                                                   | 9.4                                                                               |   | 3.2  |
| Green Ext Time (p_c), s                                            | 0.0                                                                               | 4.9                                                                               |                                                                                   |                                                                                   |                                                                                   | 6.0                                                                               |   | 0.1  |
| Intersection Summary                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |      |
| HCM 2010 Ctrl Delay                                                |                                                                                   |                                                                                   | 5.9                                                                               |                                                                                   |                                                                                   |                                                                                   |   |      |
| HCM 2010 LOS                                                       |                                                                                   |                                                                                   | A                                                                                 |                                                                                   |                                                                                   |                                                                                   |   |      |
| Notes                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |      |
| User approved pedestrian interval to be less than phase max green. |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |      |

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User approved volume balancing among the lanes for turning movement.

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| Intersection             |        |      |        |      |        |      |  |
|--------------------------|--------|------|--------|------|--------|------|--|
| Int Delay, s/veh         | 1.5    |      |        |      |        |      |  |
| Movement                 | EBL    | EBR  | NBL    | NBT  | SBT    | SBR  |  |
| Vol, veh/h               | 29     | 43   | 19     | 805  | 647    | 10   |  |
| Conflicting Peds, #/hr   | 0      | 0    | 0      | 0    | 0      | 0    |  |
| Sign Control             | Stop   | Stop | Free   | Free | Free   | Free |  |
| RT Channelized           | -      | None | -      | None | -      | None |  |
| Storage Length           | 0      | -    | 170    | -    | -      | -    |  |
| Veh in Median Storage, # | 0      | -    | -      | 0    | 0      | -    |  |
| Grade, %                 | 0      | -    | -      | 0    | 0      | -    |  |
| Peak Hour Factor         | 97     | 97   | 97     | 97   | 97     | 97   |  |
| Heavy Vehicles, %        | 0      | 0    | 0      | 2    | 2      | 0    |  |
| Mvmt Flow                | 30     | 44   | 20     | 830  | 667    | 10   |  |
| Major/Minor              | Minor2 |      | Major1 |      | Major2 |      |  |
| Conflicting Flow All     | 1541   | 672  | 677    | 0    | -      | 0    |  |
| Stage 1                  | 672    | -    | -      | -    | -      | -    |  |
| Stage 2                  | 869    | -    | -      | -    | -      | -    |  |
| Critical Hdwy            | 6.4    | 6.2  | 4.1    | -    | -      | -    |  |
| Critical Hdwy Stg 1      | 5.4    | -    | -      | -    | -      | -    |  |
| Critical Hdwy Stg 2      | 5.4    | -    | -      | -    | -      | -    |  |
| Follow-up Hdwy           | 3.5    | 3.3  | 2.2    | -    | -      | -    |  |
| Pot Cap-1 Maneuver       | 128    | 459  | 924    | -    | -      | -    |  |
| Stage 1                  | 511    | -    | -      | -    | -      | -    |  |
| Stage 2                  | 414    | -    | -      | -    | -      | -    |  |
| Platoon blocked, %       |        |      |        | -    | -      | -    |  |
| Mov Cap-1 Maneuver       | 125    | 459  | 924    | -    | -      | -    |  |
| Mov Cap-2 Maneuver       | 125    | -    | -      | -    | -      | -    |  |
| Stage 1                  | 511    | -    | -      | -    | -      | -    |  |
| Stage 2                  | 405    | -    | -      | -    | -      | -    |  |
| Approach                 | EB     |      | NB     |      | SB     |      |  |
| HCM Control Delay, s     | 29.3   |      | 0.2    |      | 0      |      |  |
| HCM LOS                  | D      |      |        |      |        |      |  |
| Minor Lane/Major Mvmt    | NBL    | NB   | EBLn1  | SBT  | SBR    |      |  |
| Capacity (veh/h)         | 924    | -    | 221    | -    | -      |      |  |
| HCM Lane V/C Ratio       | 0.021  | -    | 0.336  | -    | -      |      |  |
| HCM Control Delay (s)    | 9      | -    | 29.3   | -    | -      |      |  |
| HCM Lane LOS             | A      | -    | D      | -    | -      |      |  |
| HCM 95th %tile Q(veh)    | 0.1    | -    | 1.4    | -    | -      |      |  |

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| Intersection             |        |         |        |      |        |      |
|--------------------------|--------|---------|--------|------|--------|------|
| Int Delay, s/veh         | 1.8    |         |        |      |        |      |
| Movement                 | WBL    | WBR     | NBT    | NBR  | SBL    | SBT  |
| Vol, veh/h               | 36     | 29      | 762    | 46   | 27     | 677  |
| Conflicting Peds, #/hr   | 5      | 5       | 0      | 0    | 0      | 0    |
| Sign Control             | Stop   | Stop    | Free   | Free | Free   | Free |
| RT Channelized           | -      | None    | -      | None | -      | None |
| Storage Length           | 0      | -       | -      | -    | 70     | -    |
| Veh in Median Storage, # | 0      | -       | 0      | -    | -      | 0    |
| Grade, %                 | 0      | -       | 0      | -    | -      | 0    |
| Peak Hour Factor         | 97     | 97      | 97     | 97   | 97     | 97   |
| Heavy Vehicles, %        | 0      | 0       | 2      | 0    | 0      | 2    |
| Mvmt Flow                | 37     | 30      | 786    | 47   | 28     | 698  |
| Major/Minor              | Minor1 |         | Major1 |      | Major2 |      |
| Conflicting Flow All     | 1568   | 814     | 0      | 0    | 838    | 0    |
| Stage 1                  | 814    | -       | -      | -    | -      | -    |
| Stage 2                  | 754    | -       | -      | -    | -      | -    |
| Critical Hdwy            | 6.4    | 6.2     | -      | -    | 4.1    | -    |
| Critical Hdwy Stg 1      | 5.4    | -       | -      | -    | -      | -    |
| Critical Hdwy Stg 2      | 5.4    | -       | -      | -    | -      | -    |
| Follow-up Hdwy           | 3.5    | 3.3     | -      | -    | 2.2    | -    |
| Pot Cap-1 Maneuver       | 123    | 381     | -      | -    | 805    | -    |
| Stage 1                  | 439    | -       | -      | -    | -      | -    |
| Stage 2                  | 468    | -       | -      | -    | -      | -    |
| Platoon blocked, %       |        |         | -      | -    |        | -    |
| Mov Cap-1 Maneuver       | 118    | 379     | -      | -    | 805    | -    |
| Mov Cap-2 Maneuver       | 118    | -       | -      | -    | -      | -    |
| Stage 1                  | 437    | -       | -      | -    | -      | -    |
| Stage 2                  | 452    | -       | -      | -    | -      | -    |
| Approach                 | WB     |         | NB     |      | SB     |      |
| HCM Control Delay, s     | 39.3   |         | 0      |      | 0.4    |      |
| HCM LOS                  | E      |         |        |      |        |      |
| Minor Lane/Major Mvmt    | NBT    | NBLn1   | SBL    | SBT  |        |      |
| Capacity (veh/h)         | -      | - 170   | 805    | -    |        |      |
| HCM Lane V/C Ratio       | -      | - 0.394 | 0.035  | -    |        |      |
| HCM Control Delay (s)    | -      | - 39.3  | 9.6    | -    |        |      |
| HCM Lane LOS             | -      | - E     | A      | -    |        |      |
| HCM 95th %tile Q(veh)    | -      | - 1.7   | 0.1    | -    |        |      |

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|                                                                    |  |  |  |  |  |   |   |      |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---|------|
| Movement                                                           | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                                |   |      |
| Lane Configurations                                                |  |                                                                                   |  |                                                                                   |  |  |   |      |
| Volume (veh/h)                                                     | 36                                                                                | 29                                                                                | 762                                                                               | 46                                                                                | 27                                                                                | 677                                                                                |   |      |
| Number                                                             | 3                                                                                 | 18                                                                                | 2                                                                                 | 12                                                                                | 1                                                                                 | 6                                                                                  |   |      |
| Initial Q (Qb), veh                                                | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  |   |      |
| Ped-Bike Adj(A_pbT)                                                | 1.00                                                                              | 0.94                                                                              |                                                                                   | 0.98                                                                              | 1.00                                                                              |                                                                                    |   |      |
| Parking Bus, Adj                                                   | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               |   |      |
| Adj Sat Flow, veh/h/ln                                             | 1900                                                                              | 1900                                                                              | 1865                                                                              | 1900                                                                              | 1900                                                                              | 1863                                                                               |   |      |
| Adj Flow Rate, veh/h                                               | 37                                                                                | 30                                                                                | 786                                                                               | 47                                                                                | 28                                                                                | 698                                                                                |   |      |
| Adj No. of Lanes                                                   | 0                                                                                 | 0                                                                                 | 1                                                                                 | 0                                                                                 | 1                                                                                 | 1                                                                                  |   |      |
| Peak Hour Factor                                                   | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                               |   |      |
| Percent Heavy Veh, %                                               | 0                                                                                 | 0                                                                                 | 2                                                                                 | 2                                                                                 | 0                                                                                 | 2                                                                                  |   |      |
| Cap, veh/h                                                         | 57                                                                                | 46                                                                                | 966                                                                               | 58                                                                                | 50                                                                                | 1306                                                                               |   |      |
| Arrive On Green                                                    | 0.06                                                                              | 0.06                                                                              | 0.56                                                                              | 0.56                                                                              | 0.03                                                                              | 0.70                                                                               |   |      |
| Sat Flow, veh/h                                                    | 910                                                                               | 738                                                                               | 1740                                                                              | 104                                                                               | 1810                                                                              | 1863                                                                               |   |      |
| Grp Volume(v), veh/h                                               | 68                                                                                | 0                                                                                 | 0                                                                                 | 833                                                                               | 28                                                                                | 698                                                                                |   |      |
| Grp Sat Flow(s),veh/h/ln                                           | 1673                                                                              | 0                                                                                 | 0                                                                                 | 1844                                                                              | 1810                                                                              | 1863                                                                               |   |      |
| Q Serve(g_s), s                                                    | 1.3                                                                               | 0.0                                                                               | 0.0                                                                               | 12.4                                                                              | 0.5                                                                               | 6.1                                                                                |   |      |
| Cycle Q Clear(g_c), s                                              | 1.3                                                                               | 0.0                                                                               | 0.0                                                                               | 12.4                                                                              | 0.5                                                                               | 6.1                                                                                |   |      |
| Prop In Lane                                                       | 0.54                                                                              | 0.44                                                                              |                                                                                   | 0.06                                                                              | 1.00                                                                              |                                                                                    |   |      |
| Lane Grp Cap(c), veh/h                                             | 104                                                                               | 0                                                                                 | 0                                                                                 | 1023                                                                              | 50                                                                                | 1306                                                                               |   |      |
| V/C Ratio(X)                                                       | 0.65                                                                              | 0.00                                                                              | 0.00                                                                              | 0.81                                                                              | 0.57                                                                              | 0.53                                                                               |   |      |
| Avail Cap(c_a), veh/h                                              | 545                                                                               | 0                                                                                 | 0                                                                                 | 1255                                                                              | 214                                                                               | 1709                                                                               |   |      |
| HCM Platoon Ratio                                                  | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               |   |      |
| Upstream Filter(I)                                                 | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               |   |      |
| Uniform Delay (d), s/veh                                           | 15.5                                                                              | 0.0                                                                               | 0.0                                                                               | 6.1                                                                               | 16.2                                                                              | 2.4                                                                                |   |      |
| Incr Delay (d2), s/veh                                             | 6.7                                                                               | 0.0                                                                               | 0.0                                                                               | 3.5                                                                               | 9.7                                                                               | 0.3                                                                                |   |      |
| Initial Q Delay(d3),s/veh                                          | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                |   |      |
| %ile BackOfQ(50%),veh/ln                                           | 0.8                                                                               | 0.0                                                                               | 0.0                                                                               | 7.0                                                                               | 0.4                                                                               | 3.0                                                                                |   |      |
| LnGrp Delay(d),s/veh                                               | 22.2                                                                              | 0.0                                                                               | 0.0                                                                               | 9.6                                                                               | 26.0                                                                              | 2.8                                                                                |   |      |
| LnGrp LOS                                                          | C                                                                                 |                                                                                   |                                                                                   | A                                                                                 | C                                                                                 | A                                                                                  |   |      |
| Approach Vol, veh/h                                                | 68                                                                                |                                                                                   | 833                                                                               |                                                                                   |                                                                                   | 726                                                                                |   |      |
| Approach Delay, s/veh                                              | 22.2                                                                              |                                                                                   | 9.6                                                                               |                                                                                   |                                                                                   | 3.7                                                                                |   |      |
| Approach LOS                                                       | C                                                                                 |                                                                                   | A                                                                                 |                                                                                   |                                                                                   | A                                                                                  |   |      |
| Timer                                                              | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                  | 7 | 8    |
| Assigned Phs                                                       | 1                                                                                 | 2                                                                                 |                                                                                   |                                                                                   |                                                                                   | 6                                                                                  |   | 8    |
| Phs Duration (G+Y+Rc), s                                           | 4.9                                                                               | 22.8                                                                              |                                                                                   |                                                                                   |                                                                                   | 27.7                                                                               |   | 6.1  |
| Change Period (Y+Rc), s                                            | 4.0                                                                               | 4.0                                                                               |                                                                                   |                                                                                   |                                                                                   | 4.0                                                                                |   | 4.0  |
| Max Green Setting (Gmax),s                                         | 4.0                                                                               | 23.0                                                                              |                                                                                   |                                                                                   |                                                                                   | 31.0                                                                               |   | 11.0 |
| Max Q Clear Time (g_c+I1),s                                        | 4.5                                                                               | 14.4                                                                              |                                                                                   |                                                                                   |                                                                                   | 8.1                                                                                |   | 3.3  |
| Green Ext Time (p_c), s                                            | 0.0                                                                               | 4.4                                                                               |                                                                                   |                                                                                   |                                                                                   | 7.1                                                                                |   | 0.1  |
| Intersection Summary                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |   |      |
| HCM 2010 Ctrl Delay                                                |                                                                                   |                                                                                   | 7.5                                                                               |                                                                                   |                                                                                   |                                                                                    |   |      |
| HCM 2010 LOS                                                       |                                                                                   |                                                                                   | A                                                                                 |                                                                                   |                                                                                   |                                                                                    |   |      |
| Notes                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |   |      |
| User approved pedestrian interval to be less than phase max green. |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |   |      |

Existing PM Peak Hour  
with Signal

Synchro 8 Report  
Page 1

HCM 2010 Signalized Intersection Summary  
4: SR29 & Pratt Ave

22/06/2016

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User approved volume balancing among the lanes for turning movement.

HCM 2010 TWSC  
2: SR29 & Greystone

25/10/2016

| Intersection             |        |      |        |      |        |      |  |
|--------------------------|--------|------|--------|------|--------|------|--|
| Int Delay, s/veh         | 0.3    |      |        |      |        |      |  |
| Movement                 | EBL    | EBR  | NBL    | NBT  | SBT    | SBR  |  |
| Vol, veh/h               | 4      | 6    | 24     | 516  | 680    | 17   |  |
| Conflicting Peds, #/hr   | 0      | 0    | 0      | 0    | 0      | 0    |  |
| Sign Control             | Stop   | Stop | Free   | Free | Free   | Free |  |
| RT Channelized           | -      | None | -      | None | -      | None |  |
| Storage Length           | 0      | -    | 170    | -    | -      | -    |  |
| Veh in Median Storage, # | 0      | -    | -      | 0    | 0      | -    |  |
| Grade, %                 | 0      | -    | -      | 0    | 0      | -    |  |
| Peak Hour Factor         | 92     | 92   | 92     | 92   | 92     | 92   |  |
| Heavy Vehicles, %        | 0      | 0    | 0      | 8    | 6      | 0    |  |
| Mvmt Flow                | 4      | 7    | 26     | 561  | 739    | 18   |  |
| Major/Minor              | Minor2 |      | Major1 |      | Major2 |      |  |
| Conflicting Flow All     | 1361   | 748  | 758    | 0    | -      | 0    |  |
| Stage 1                  | 748    | -    | -      | -    | -      | -    |  |
| Stage 2                  | 613    | -    | -      | -    | -      | -    |  |
| Critical Hdwy            | 6.4    | 6.2  | 4.1    | -    | -      | -    |  |
| Critical Hdwy Stg 1      | 5.4    | -    | -      | -    | -      | -    |  |
| Critical Hdwy Stg 2      | 5.4    | -    | -      | -    | -      | -    |  |
| Follow-up Hdwy           | 3.5    | 3.3  | 2.2    | -    | -      | -    |  |
| Pot Cap-1 Maneuver       | 165    | 416  | 862    | -    | -      | -    |  |
| Stage 1                  | 471    | -    | -      | -    | -      | -    |  |
| Stage 2                  | 544    | -    | -      | -    | -      | -    |  |
| Platoon blocked, %       |        |      |        | -    | -      | -    |  |
| Mov Cap-1 Maneuver       | 160    | 416  | 862    | -    | -      | -    |  |
| Mov Cap-2 Maneuver       | 160    | -    | -      | -    | -      | -    |  |
| Stage 1                  | 471    | -    | -      | -    | -      | -    |  |
| Stage 2                  | 528    | -    | -      | -    | -      | -    |  |
| Approach                 | EB     |      | NB     |      | SB     |      |  |
| HCM Control Delay, s     | 19.8   |      | 0.4    |      | 0      |      |  |
| HCM LOS                  | C      |      |        |      |        |      |  |
| Minor Lane/Major Mvmt    | NBL    | NB   | EBLn1  | SBT  | SBR    |      |  |
| Capacity (veh/h)         | 862    | -    | 254    | -    | -      |      |  |
| HCM Lane V/C Ratio       | 0.03   | -    | 0.043  | -    | -      |      |  |
| HCM Control Delay (s)    | 9.3    | -    | 19.8   | -    | -      |      |  |
| HCM Lane LOS             | A      | -    | C      | -    | -      |      |  |
| HCM 95th %tile Q(veh)    | 0.1    | -    | 0.1    | -    | -      |      |  |

Existing AM Peak Hour  
with Project

without signal  
Existing AM with Project.syn

HCM Unsignalized Intersection Capacity Analysis  
4: SR29 & Pratt Ave

25/10/2016

|                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
|                                   |  |  |  |  |  |  |
| Movement                          | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations               |  |                                                                                   |  |                                                                                   |  |  |
| Volume (veh/h)                    | 43                                                                                | 27                                                                                | 502                                                                               | 56                                                                                | 15                                                                                | 702                                                                               |
| Sign Control                      | Stop                                                                              |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |
| Grade                             | 0%                                                                                |                                                                                   | 0%                                                                                |                                                                                   |                                                                                   | 0%                                                                                |
| Peak Hour Factor                  | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              |
| Hourly flow rate (vph)            | 47                                                                                | 29                                                                                | 546                                                                               | 61                                                                                | 16                                                                                | 763                                                                               |
| Pedestrians                       |                                                                                   |                                                                                   | 5                                                                                 |                                                                                   |                                                                                   | 5                                                                                 |
| Lane Width (ft)                   |                                                                                   |                                                                                   | 12.0                                                                              |                                                                                   |                                                                                   | 12.0                                                                              |
| Walking Speed (ft/s)              |                                                                                   |                                                                                   | 4.0                                                                               |                                                                                   |                                                                                   | 4.0                                                                               |
| Percent Blockage                  |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |
| Right turn flare (veh)            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Median type                       |                                                                                   |                                                                                   | None                                                                              |                                                                                   |                                                                                   | None                                                                              |
| Median storage (veh)              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Upstream signal (ft)              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| pX, platoon unblocked             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| vC, conflicting volume            | 1377                                                                              | 581                                                                               |                                                                                   |                                                                                   | 607                                                                               |                                                                                   |
| vC1, stage 1 conf vol             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| vC2, stage 2 conf vol             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| vCu, unblocked vol                | 1377                                                                              | 581                                                                               |                                                                                   |                                                                                   | 607                                                                               |                                                                                   |
| tC, single (s)                    | 6.4                                                                               | 6.2                                                                               |                                                                                   |                                                                                   | 4.1                                                                               |                                                                                   |
| tC, 2 stage (s)                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| tF (s)                            | 3.5                                                                               | 3.3                                                                               |                                                                                   |                                                                                   | 2.2                                                                               |                                                                                   |
| p0 queue free %                   | 70                                                                                | 94                                                                                |                                                                                   |                                                                                   | 98                                                                                |                                                                                   |
| cM capacity (veh/h)               | 158                                                                               | 515                                                                               |                                                                                   |                                                                                   | 981                                                                               |                                                                                   |
| Direction, Lane #                 | WB 1                                                                              | NB 1                                                                              | SB 1                                                                              | SB 2                                                                              |                                                                                   |                                                                                   |
| Volume Total                      | 76                                                                                | 607                                                                               | 16                                                                                | 763                                                                               |                                                                                   |                                                                                   |
| Volume Left                       | 47                                                                                | 0                                                                                 | 16                                                                                | 0                                                                                 |                                                                                   |                                                                                   |
| Volume Right                      | 29                                                                                | 61                                                                                | 0                                                                                 | 0                                                                                 |                                                                                   |                                                                                   |
| cSH                               | 216                                                                               | 1700                                                                              | 981                                                                               | 1700                                                                              |                                                                                   |                                                                                   |
| Volume to Capacity                | 0.35                                                                              | 0.36                                                                              | 0.02                                                                              | 0.45                                                                              |                                                                                   |                                                                                   |
| Queue Length 95th (ft)            | 39                                                                                | 0                                                                                 | 1                                                                                 | 0                                                                                 |                                                                                   |                                                                                   |
| Control Delay (s)                 | 30.5                                                                              | 0.0                                                                               | 8.7                                                                               | 0.0                                                                               |                                                                                   |                                                                                   |
| Lane LOS                          | D                                                                                 |                                                                                   | A                                                                                 |                                                                                   |                                                                                   |                                                                                   |
| Approach Delay (s)                | 30.5                                                                              | 0.0                                                                               | 0.2                                                                               |                                                                                   |                                                                                   |                                                                                   |
| Approach LOS                      | D                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Intersection Summary              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Average Delay                     |                                                                                   | 1.7                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Intersection Capacity Utilization |                                                                                   | 49.3%                                                                             |                                                                                   | ICU Level of Service                                                              | A                                                                                 |                                                                                   |
| Analysis Period (min)             |                                                                                   | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

Existing AM Peak Hour  
with Project

without signal  
Existing AM with Project.syn



HCM 2010 Signalized Intersection Summary  
4: SR29 & Pratt Ave

17/10/2016

|                                                                    |  |  |  |  |  |  |   |      |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---|------|
| Movement                                                           | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |   |      |
| Lane Configurations                                                |  |                                                                                   |  |                                                                                   |  |  |   |      |
| Volume (veh/h)                                                     | 43                                                                                | 27                                                                                | 502                                                                               | 56                                                                                | 15                                                                                | 702                                                                               |   |      |
| Number                                                             | 3                                                                                 | 18                                                                                | 2                                                                                 | 12                                                                                | 1                                                                                 | 6                                                                                 |   |      |
| Initial Q (Qb), veh                                                | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 |   |      |
| Ped-Bike Adj(A_pbT)                                                | 1.00                                                                              | 0.95                                                                              |                                                                                   | 0.98                                                                              | 1.00                                                                              |                                                                                   |   |      |
| Parking Bus, Adj                                                   | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |   |      |
| Adj Sat Flow, veh/h/ln                                             | 1900                                                                              | 1900                                                                              | 1772                                                                              | 1900                                                                              | 1900                                                                              | 1792                                                                              |   |      |
| Adj Flow Rate, veh/h                                               | 47                                                                                | 29                                                                                | 546                                                                               | 61                                                                                | 16                                                                                | 763                                                                               |   |      |
| Adj No. of Lanes                                                   | 0                                                                                 | 0                                                                                 | 1                                                                                 | 0                                                                                 | 1                                                                                 | 1                                                                                 |   |      |
| Peak Hour Factor                                                   | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              |   |      |
| Percent Heavy Veh, %                                               | 0                                                                                 | 0                                                                                 | 8                                                                                 | 8                                                                                 | 0                                                                                 | 6                                                                                 |   |      |
| Cap, veh/h                                                         | 72                                                                                | 45                                                                                | 785                                                                               | 88                                                                                | 30                                                                                | 1176                                                                              |   |      |
| Arrive On Green                                                    | 0.07                                                                              | 0.07                                                                              | 0.50                                                                              | 0.50                                                                              | 0.02                                                                              | 0.66                                                                              |   |      |
| Sat Flow, veh/h                                                    | 1035                                                                              | 638                                                                               | 1562                                                                              | 175                                                                               | 1810                                                                              | 1792                                                                              |   |      |
| Grp Volume(v), veh/h                                               | 77                                                                                | 0                                                                                 | 0                                                                                 | 607                                                                               | 16                                                                                | 763                                                                               |   |      |
| Grp Sat Flow(s),veh/h/ln                                           | 1695                                                                              | 0                                                                                 | 0                                                                                 | 1737                                                                              | 1810                                                                              | 1792                                                                              |   |      |
| Q Serve(g_s), s                                                    | 1.3                                                                               | 0.0                                                                               | 0.0                                                                               | 7.8                                                                               | 0.3                                                                               | 7.4                                                                               |   |      |
| Cycle Q Clear(g_c), s                                              | 1.3                                                                               | 0.0                                                                               | 0.0                                                                               | 7.8                                                                               | 0.3                                                                               | 7.4                                                                               |   |      |
| Prop In Lane                                                       | 0.61                                                                              | 0.38                                                                              |                                                                                   | 0.10                                                                              | 1.00                                                                              |                                                                                   |   |      |
| Lane Grp Cap(c), veh/h                                             | 119                                                                               | 0                                                                                 | 0                                                                                 | 873                                                                               | 30                                                                                | 1176                                                                              |   |      |
| V/C Ratio(X)                                                       | 0.65                                                                              | 0.00                                                                              | 0.00                                                                              | 0.70                                                                              | 0.53                                                                              | 0.65                                                                              |   |      |
| Avail Cap(c_a), veh/h                                              | 638                                                                               | 0                                                                                 | 0                                                                                 | 1368                                                                              | 248                                                                               | 1903                                                                              |   |      |
| HCM Platoon Ratio                                                  | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |   |      |
| Upstream Filter(I)                                                 | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |   |      |
| Uniform Delay (d), s/veh                                           | 13.2                                                                              | 0.0                                                                               | 0.0                                                                               | 5.6                                                                               | 14.2                                                                              | 3.0                                                                               |   |      |
| Incr Delay (d2), s/veh                                             | 5.8                                                                               | 0.0                                                                               | 0.0                                                                               | 1.0                                                                               | 13.7                                                                              | 0.6                                                                               |   |      |
| Initial Q Delay(d3),s/veh                                          | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |   |      |
| %ile BackOfQ(50%),veh/ln                                           | 0.8                                                                               | 0.0                                                                               | 0.0                                                                               | 3.8                                                                               | 0.2                                                                               | 3.6                                                                               |   |      |
| LnGrp Delay(d),s/veh                                               | 19.1                                                                              | 0.0                                                                               | 0.0                                                                               | 6.6                                                                               | 27.9                                                                              | 3.6                                                                               |   |      |
| LnGrp LOS                                                          | B                                                                                 |                                                                                   |                                                                                   | A                                                                                 | C                                                                                 | A                                                                                 |   |      |
| Approach Vol, veh/h                                                | 77                                                                                |                                                                                   | 607                                                                               |                                                                                   |                                                                                   | 779                                                                               |   |      |
| Approach Delay, s/veh                                              | 19.1                                                                              |                                                                                   | 6.6                                                                               |                                                                                   |                                                                                   | 4.1                                                                               |   |      |
| Approach LOS                                                       | B                                                                                 |                                                                                   | A                                                                                 |                                                                                   |                                                                                   | A                                                                                 |   |      |
| Timer                                                              | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7 | 8    |
| Assigned Phs                                                       | 1                                                                                 | 2                                                                                 |                                                                                   |                                                                                   |                                                                                   | 6                                                                                 |   | 8    |
| Phs Duration (G+Y+Rc), s                                           | 4.5                                                                               | 18.7                                                                              |                                                                                   |                                                                                   |                                                                                   | 23.2                                                                              |   | 6.0  |
| Change Period (Y+Rc), s                                            | 4.0                                                                               | 4.0                                                                               |                                                                                   |                                                                                   |                                                                                   | 4.0                                                                               |   | 4.0  |
| Max Green Setting (Gmax),s                                         | 4.0                                                                               | 23.0                                                                              |                                                                                   |                                                                                   |                                                                                   | 31.0                                                                              |   | 11.0 |
| Max Q Clear Time (g_c+I1),s                                        | 2.8                                                                               | 9.8                                                                               |                                                                                   |                                                                                   |                                                                                   | 9.4                                                                               |   | 3.3  |
| Green Ext Time (p_c), s                                            | 0.0                                                                               | 4.9                                                                               |                                                                                   |                                                                                   |                                                                                   | 5.9                                                                               |   | 0.1  |
| Intersection Summary                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |      |
| HCM 2010 Ctrl Delay                                                |                                                                                   |                                                                                   | 5.9                                                                               |                                                                                   |                                                                                   |                                                                                   |   |      |
| HCM 2010 LOS                                                       |                                                                                   |                                                                                   | A                                                                                 |                                                                                   |                                                                                   |                                                                                   |   |      |
| Notes                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |      |
| User approved pedestrian interval to be less than phase max green. |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |      |

Existing AM Peak Hour  
with Project

with signal  
Existing with project AM w-signal.syn

HCM 2010 Signalized Intersection Summary  
4: SR29 & Pratt Ave

17/10/2016

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User approved volume balancing among the lanes for turning movement.

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Existing AM Peak Hour  
with Project

with signal  
Existing with project AM w-signal.syn

HCM 2010 TWSC  
2: SR29 & Greystone

25/10/2016

| Intersection             |        |      |        |      |        |      |  |
|--------------------------|--------|------|--------|------|--------|------|--|
| Int Delay, s/veh         | 0.8    |      |        |      |        |      |  |
| Movement                 | EBL    | EBR  | NBL    | NBT  | SBT    | SBR  |  |
| Vol, veh/h               | 19     | 28   | 12     | 806  | 647    | 7    |  |
| Conflicting Peds, #/hr   | 0      | 0    | 0      | 0    | 0      | 0    |  |
| Sign Control             | Stop   | Stop | Free   | Free | Free   | Free |  |
| RT Channelized           | -      | None | -      | None | -      | None |  |
| Storage Length           | 0      | -    | 170    | -    | -      | -    |  |
| Veh in Median Storage, # | 0      | -    | -      | 0    | 0      | -    |  |
| Grade, %                 | 0      | -    | -      | 0    | 0      | -    |  |
| Peak Hour Factor         | 97     | 97   | 97     | 97   | 97     | 97   |  |
| Heavy Vehicles, %        | 0      | 0    | 0      | 2    | 2      | 0    |  |
| Mvmt Flow                | 20     | 29   | 12     | 831  | 667    | 7    |  |
| Major/Minor              | Minor2 |      | Major1 |      | Major2 |      |  |
| Conflicting Flow All     | 1527   | 671  | 674    | 0    | -      | 0    |  |
| Stage 1                  | 671    | -    | -      | -    | -      | -    |  |
| Stage 2                  | 856    | -    | -      | -    | -      | -    |  |
| Critical Hdwy            | 6.4    | 6.2  | 4.1    | -    | -      | -    |  |
| Critical Hdwy Stg 1      | 5.4    | -    | -      | -    | -      | -    |  |
| Critical Hdwy Stg 2      | 5.4    | -    | -      | -    | -      | -    |  |
| Follow-up Hdwy           | 3.5    | 3.3  | 2.2    | -    | -      | -    |  |
| Pot Cap-1 Maneuver       | 131    | 460  | 927    | -    | -      | -    |  |
| Stage 1                  | 512    | -    | -      | -    | -      | -    |  |
| Stage 2                  | 420    | -    | -      | -    | -      | -    |  |
| Platoon blocked, %       |        |      |        | -    | -      | -    |  |
| Mov Cap-1 Maneuver       | 129    | 460  | 927    | -    | -      | -    |  |
| Mov Cap-2 Maneuver       | 129    | -    | -      | -    | -      | -    |  |
| Stage 1                  | 512    | -    | -      | -    | -      | -    |  |
| Stage 2                  | 415    | -    | -      | -    | -      | -    |  |
| Approach                 | EB     |      | NB     |      | SB     |      |  |
| HCM Control Delay, s     | 25.2   |      | 0.1    |      | 0      |      |  |
| HCM LOS                  | D      |      |        |      |        |      |  |
| Minor Lane/Major Mvmt    | NBL    | NB   | EBLn1  | SBT  | SBR    |      |  |
| Capacity (veh/h)         | 927    | -    | 226    | -    | -      |      |  |
| HCM Lane V/C Ratio       | 0.013  | -    | 0.214  | -    | -      |      |  |
| HCM Control Delay (s)    | 8.9    | -    | 25.2   | -    | -      |      |  |
| HCM Lane LOS             | A      | -    | D      | -    | -      |      |  |
| HCM 95th %tile Q(veh)    | 0      | -    | 0.8    | -    | -      |      |  |

Existing PM Peak Hour  
with Project

without Signal  
Existing PM with project.syn

HCM 2010 TWSC  
4: SR29 & Pratt Ave

17/10/2016

| Intersection             |        |        |        |      |        |      |
|--------------------------|--------|--------|--------|------|--------|------|
| Int Delay, s/veh         | 1.9    |        |        |      |        |      |
| Movement                 | WBL    | WBR    | NBT    | NBR  | SBL    | SBT  |
| Vol, veh/h               | 39     | 30     | 755    | 50   | 27     | 662  |
| Conflicting Peds, #/hr   | 5      | 5      | 0      | 0    | 0      | 0    |
| Sign Control             | Stop   | Stop   | Free   | Free | Free   | Free |
| RT Channelized           | -      | None   | -      | None | -      | None |
| Storage Length           | 0      | -      | -      | -    | 70     | -    |
| Veh in Median Storage, # | 0      | -      | 0      | -    | -      | 0    |
| Grade, %                 | 0      | -      | 0      | -    | -      | 0    |
| Peak Hour Factor         | 97     | 97     | 97     | 97   | 97     | 97   |
| Heavy Vehicles, %        | 0      | 0      | 2      | 0    | 0      | 2    |
| Mvmt Flow                | 40     | 31     | 778    | 52   | 28     | 682  |
| Major/Minor              | Minor1 |        | Major1 |      | Major2 |      |
| Conflicting Flow All     | 1547   | 809    | 0      | 0    | 835    | 0    |
| Stage 1                  | 809    | -      | -      | -    | -      | -    |
| Stage 2                  | 738    | -      | -      | -    | -      | -    |
| Critical Hdwy            | 6.4    | 6.2    | -      | -    | 4.1    | -    |
| Critical Hdwy Stg 1      | 5.4    | -      | -      | -    | -      | -    |
| Critical Hdwy Stg 2      | 5.4    | -      | -      | -    | -      | -    |
| Follow-up Hdwy           | 3.5    | 3.3    | -      | -    | 2.2    | -    |
| Pot Cap-1 Maneuver       | 127    | 384    | -      | -    | 807    | -    |
| Stage 1                  | 441    | -      | -      | -    | -      | -    |
| Stage 2                  | 476    | -      | -      | -    | -      | -    |
| Platoon blocked, %       |        |        | -      | -    |        | -    |
| Mov Cap-1 Maneuver       | 122    | 382    | -      | -    | 807    | -    |
| Mov Cap-2 Maneuver       | 122    | -      | -      | -    | -      | -    |
| Stage 1                  | 439    | -      | -      | -    | -      | -    |
| Stage 2                  | 459    | -      | -      | -    | -      | -    |
| Approach                 | WB     |        | NB     |      | SB     |      |
| HCM Control Delay, s     | 39.6   |        | 0      |      | 0.4    |      |
| HCM LOS                  | E      |        |        |      |        |      |
| Minor Lane/Major Mvmt    | NBT    | NBLn1  | SBL    | SBT  |        |      |
| Capacity (veh/h)         | -      | - 173  | 807    | -    |        |      |
| HCM Lane V/C Ratio       | -      | -0.411 | 0.034  | -    |        |      |
| HCM Control Delay (s)    | -      | - 39.6 | 9.6    | -    |        |      |
| HCM Lane LOS             | -      | - E    | A      | -    |        |      |
| HCM 95th %tile Q(veh)    | -      | - 1.8  | 0.1    | -    |        |      |

Existing PM Peak Hour  
with Project

without Signal  
Existing PM with project.syn

HCM 2010 Signalized Intersection Summary  
4: SR29 & Pratt Ave

17/10/2016

|                                                                    |  |  |  |  |  |  |   |      |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---|------|
| Movement                                                           | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |   |      |
| Lane Configurations                                                |  |                                                                                   |  |                                                                                   |  |  |   |      |
| Volume (veh/h)                                                     | 39                                                                                | 30                                                                                | 755                                                                               | 50                                                                                | 27                                                                                | 662                                                                               |   |      |
| Number                                                             | 3                                                                                 | 18                                                                                | 2                                                                                 | 12                                                                                | 1                                                                                 | 6                                                                                 |   |      |
| Initial Q (Qb), veh                                                | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 |   |      |
| Ped-Bike Adj(A_pbT)                                                | 1.00                                                                              | 0.94                                                                              |                                                                                   | 0.98                                                                              | 1.00                                                                              |                                                                                   |   |      |
| Parking Bus, Adj                                                   | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |   |      |
| Adj Sat Flow, veh/h/ln                                             | 1900                                                                              | 1900                                                                              | 1865                                                                              | 1900                                                                              | 1900                                                                              | 1863                                                                              |   |      |
| Adj Flow Rate, veh/h                                               | 40                                                                                | 31                                                                                | 778                                                                               | 52                                                                                | 28                                                                                | 682                                                                               |   |      |
| Adj No. of Lanes                                                   | 0                                                                                 | 0                                                                                 | 1                                                                                 | 0                                                                                 | 1                                                                                 | 1                                                                                 |   |      |
| Peak Hour Factor                                                   | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              |   |      |
| Percent Heavy Veh, %                                               | 0                                                                                 | 0                                                                                 | 2                                                                                 | 2                                                                                 | 0                                                                                 | 2                                                                                 |   |      |
| Cap, veh/h                                                         | 60                                                                                | 47                                                                                | 955                                                                               | 64                                                                                | 50                                                                                | 1302                                                                              |   |      |
| Arrive On Green                                                    | 0.06                                                                              | 0.06                                                                              | 0.55                                                                              | 0.55                                                                              | 0.03                                                                              | 0.70                                                                              |   |      |
| Sat Flow, veh/h                                                    | 931                                                                               | 722                                                                               | 1726                                                                              | 115                                                                               | 1810                                                                              | 1863                                                                              |   |      |
| Grp Volume(v), veh/h                                               | 72                                                                                | 0                                                                                 | 0                                                                                 | 830                                                                               | 28                                                                                | 682                                                                               |   |      |
| Grp Sat Flow(s),veh/h/ln                                           | 1676                                                                              | 0                                                                                 | 0                                                                                 | 1841                                                                              | 1810                                                                              | 1863                                                                              |   |      |
| Q Serve(g_s), s                                                    | 1.4                                                                               | 0.0                                                                               | 0.0                                                                               | 12.4                                                                              | 0.5                                                                               | 5.9                                                                               |   |      |
| Cycle Q Clear(g_c), s                                              | 1.4                                                                               | 0.0                                                                               | 0.0                                                                               | 12.4                                                                              | 0.5                                                                               | 5.9                                                                               |   |      |
| Prop In Lane                                                       | 0.56                                                                              | 0.43                                                                              |                                                                                   | 0.06                                                                              | 1.00                                                                              |                                                                                   |   |      |
| Lane Grp Cap(c), veh/h                                             | 108                                                                               | 0                                                                                 | 0                                                                                 | 1019                                                                              | 50                                                                                | 1302                                                                              |   |      |
| V/C Ratio(X)                                                       | 0.67                                                                              | 0.00                                                                              | 0.00                                                                              | 0.81                                                                              | 0.57                                                                              | 0.52                                                                              |   |      |
| Avail Cap(c_a), veh/h                                              | 545                                                                               | 0                                                                                 | 0                                                                                 | 1253                                                                              | 214                                                                               | 1708                                                                              |   |      |
| HCM Platoon Ratio                                                  | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |   |      |
| Upstream Filter(I)                                                 | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |   |      |
| Uniform Delay (d), s/veh                                           | 15.5                                                                              | 0.0                                                                               | 0.0                                                                               | 6.1                                                                               | 16.2                                                                              | 2.4                                                                               |   |      |
| Incr Delay (d2), s/veh                                             | 6.9                                                                               | 0.0                                                                               | 0.0                                                                               | 3.5                                                                               | 9.7                                                                               | 0.3                                                                               |   |      |
| Initial Q Delay(d3),s/veh                                          | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |   |      |
| %ile BackOfQ(50%),veh/ln                                           | 0.8                                                                               | 0.0                                                                               | 0.0                                                                               | 7.0                                                                               | 0.4                                                                               | 3.0                                                                               |   |      |
| LnGrp Delay(d),s/veh                                               | 22.3                                                                              | 0.0                                                                               | 0.0                                                                               | 9.7                                                                               | 26.0                                                                              | 2.7                                                                               |   |      |
| LnGrp LOS                                                          | C                                                                                 |                                                                                   |                                                                                   | A                                                                                 | C                                                                                 | A                                                                                 |   |      |
| Approach Vol, veh/h                                                | 72                                                                                |                                                                                   | 830                                                                               |                                                                                   |                                                                                   | 710                                                                               |   |      |
| Approach Delay, s/veh                                              | 22.3                                                                              |                                                                                   | 9.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |   |      |
| Approach LOS                                                       | C                                                                                 |                                                                                   | A                                                                                 |                                                                                   |                                                                                   | A                                                                                 |   |      |
| Timer                                                              | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7 | 8    |
| Assigned Phs                                                       | 1                                                                                 | 2                                                                                 |                                                                                   |                                                                                   |                                                                                   | 6                                                                                 |   | 8    |
| Phs Duration (G+Y+Rc), s                                           | 4.9                                                                               | 22.7                                                                              |                                                                                   |                                                                                   |                                                                                   | 27.6                                                                              |   | 6.2  |
| Change Period (Y+Rc), s                                            | 4.0                                                                               | 4.0                                                                               |                                                                                   |                                                                                   |                                                                                   | 4.0                                                                               |   | 4.0  |
| Max Green Setting (Gmax),s                                         | 4.0                                                                               | 23.0                                                                              |                                                                                   |                                                                                   |                                                                                   | 31.0                                                                              |   | 11.0 |
| Max Q Clear Time (g_c+I1),s                                        | 4.0                                                                               | 14.4                                                                              |                                                                                   |                                                                                   |                                                                                   | 7.9                                                                               |   | 3.4  |
| Green Ext Time (p_c), s                                            | 0.0                                                                               | 4.3                                                                               |                                                                                   |                                                                                   |                                                                                   | 7.0                                                                               |   | 0.1  |
| Intersection Summary                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |      |
| HCM 2010 Ctrl Delay                                                |                                                                                   |                                                                                   | 7.6                                                                               |                                                                                   |                                                                                   |                                                                                   |   |      |
| HCM 2010 LOS                                                       |                                                                                   |                                                                                   | A                                                                                 |                                                                                   |                                                                                   |                                                                                   |   |      |
| Notes                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |      |
| User approved pedestrian interval to be less than phase max green. |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |      |

Existing PM Peak Hour  
with Project

with signal  
Existing PM + project w-signal.syn

HCM 2010 Signalized Intersection Summary  
4: SR29 & Pratt Ave

17/10/2016

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User approved volume balancing among the lanes for turning movement.

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Existing PM Peak Hour  
with Project

with signal  
Existing PM + project w-signal.syn





HCM 2010 TWSC  
2: SR29 & Greystone

22/06/2016

| Intersection             |        |      |        |      |        |      |  |
|--------------------------|--------|------|--------|------|--------|------|--|
| Int Delay, s/veh         | 0.5    |      |        |      |        |      |  |
| Movement                 | EBL    | EBR  | NBL    | NBT  | SBT    | SBR  |  |
| Vol, veh/h               | 5      | 8    | 42     | 535  | 707    | 24   |  |
| Conflicting Peds, #/hr   | 0      | 0    | 0      | 0    | 0      | 0    |  |
| Sign Control             | Stop   | Stop | Free   | Free | Free   | Free |  |
| RT Channelized           | -      | None | -      | None | -      | None |  |
| Storage Length           | 0      | -    | 170    | -    | -      | -    |  |
| Veh in Median Storage, # | 0      | -    | -      | 0    | 0      | -    |  |
| Grade, %                 | 0      | -    | -      | 0    | 0      | -    |  |
| Peak Hour Factor         | 92     | 92   | 92     | 92   | 92     | 92   |  |
| Heavy Vehicles, %        | 0      | 0    | 0      | 8    | 6      | 0    |  |
| Mvmt Flow                | 5      | 9    | 46     | 582  | 768    | 26   |  |
| Major/Minor              | Minor2 |      | Major1 |      | Major2 |      |  |
| Conflicting Flow All     | 1455   | 782  | 795    | 0    | -      | 0    |  |
| Stage 1                  | 782    | -    | -      | -    | -      | -    |  |
| Stage 2                  | 673    | -    | -      | -    | -      | -    |  |
| Critical Hdwy            | 6.4    | 6.2  | 4.1    | -    | -      | -    |  |
| Critical Hdwy Stg 1      | 5.4    | -    | -      | -    | -      | -    |  |
| Critical Hdwy Stg 2      | 5.4    | -    | -      | -    | -      | -    |  |
| Follow-up Hdwy           | 3.5    | 3.3  | 2.2    | -    | -      | -    |  |
| Pot Cap-1 Maneuver       | 145    | 397  | 835    | -    | -      | -    |  |
| Stage 1                  | 454    | -    | -      | -    | -      | -    |  |
| Stage 2                  | 511    | -    | -      | -    | -      | -    |  |
| Platoon blocked, %       |        |      |        | -    | -      | -    |  |
| Mov Cap-1 Maneuver       | 137    | 397  | 835    | -    | -      | -    |  |
| Mov Cap-2 Maneuver       | 137    | -    | -      | -    | -      | -    |  |
| Stage 1                  | 454    | -    | -      | -    | -      | -    |  |
| Stage 2                  | 483    | -    | -      | -    | -      | -    |  |
| Approach                 | EB     |      | NB     |      | SB     |      |  |
| HCM Control Delay, s     | 21.8   |      | 0.7    |      | 0      |      |  |
| HCM LOS                  | C      |      |        |      |        |      |  |
| Minor Lane/Major Mvmt    | NBL    | NB   | EBLn1  | SBT  | SBR    |      |  |
| Capacity (veh/h)         | 835    | -    | 229    | -    | -      |      |  |
| HCM Lane V/C Ratio       | 0.055  | -    | 0.062  | -    | -      |      |  |
| HCM Control Delay (s)    | 9.6    | -    | 21.8   | -    | -      |      |  |
| HCM Lane LOS             | A      | -    | C      | -    | -      |      |  |
| HCM 95th %tile Q(veh)    | 0.2    | -    | 0.2    | -    | -      |      |  |

2018 AM Peak Hour  
w-o Project

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HCM 2010 TWSC  
4: SR29 & Pratt Ave

04/11/2016

| Intersection             |        |      |      |        |       |       |        |      |      |        |      |      |
|--------------------------|--------|------|------|--------|-------|-------|--------|------|------|--------|------|------|
| Int Delay, s/veh         | 3.9    |      |      |        |       |       |        |      |      |        |      |      |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Movement                 | EBL    | EBT  | EBR  | WBL    | WBT   | WBR   | NBL    | NBT  | NBR  | SBL    | SBT  | SBR  |
| Vol, veh/h               | 8      | 3    | 8    | 42     | 4     | 27    | 17     | 537  | 70   | 16     | 732  | 7    |
| Conflicting Peds, #/hr   | 0      | 0    | 0    | 5      | 0     | 5     | 0      | 0    | 0    | 0      | 0    | 0    |
| Sign Control             | Stop   | Stop | Stop | Stop   | Stop  | Stop  | Free   | Free | Free | Free   | Free | Free |
| RT Channelized           | -      | -    | None | -      | -     | None  | -      | -    | None | -      | -    | None |
| Storage Length           | -      | -    | -    | -      | -     | -     | 0      | -    | -    | 70     | -    | -    |
| Veh in Median Storage, # | -      | 0    | -    | -      | 0     | -     | -      | 0    | -    | -      | 0    | -    |
| Grade, %                 | -      | 0    | -    | -      | 0     | -     | -      | 0    | -    | -      | 0    | -    |
| Peak Hour Factor         | 92     | 92   | 92   | 92     | 92    | 92    | 92     | 92   | 92   | 92     | 92   | 92   |
| Heavy Vehicles, %        | 0      | 0    | 0    | 0      | 0     | 0     | 0      | 8    | 0    | 0      | 6    | 0    |
| Mvmt Flow                | 9      | 3    | 9    | 46     | 4     | 29    | 18     | 584  | 76   | 17     | 796  | 8    |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Major/Minor              | Minor2 |      |      | Minor1 |       |       | Major1 |      |      | Major2 |      |      |
| Conflicting Flow All     | 1515   | 1536 | 799  | 1504   | 1502  | 627   | 803    | 0    | 0    | 665    | 0    | 0    |
| Stage 1                  | 834    | 834  | -    | 664    | 664   | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                  | 681    | 702  | -    | 840    | 838   | -     | -      | -    | -    | -      | -    | -    |
| Critical Hdwy            | 7.1    | 6.5  | 6.2  | 7.1    | 6.5   | 6.2   | 4.1    | -    | -    | 4.1    | -    | -    |
| Critical Hdwy Stg 1      | 6.1    | 5.5  | -    | 6.1    | 5.5   | -     | -      | -    | -    | -      | -    | -    |
| Critical Hdwy Stg 2      | 6.1    | 5.5  | -    | 6.1    | 5.5   | -     | -      | -    | -    | -      | -    | -    |
| Follow-up Hdwy           | 3.5    | 4    | 3.3  | 3.5    | 4     | 3.3   | 2.2    | -    | -    | 2.2    | -    | -    |
| Pot Cap-1 Maneuver       | 99     | 117  | 389  | 101    | 123   | 487   | 830    | -    | -    | 934    | -    | -    |
| Stage 1                  | 365    | 386  | -    | 453    | 461   | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                  | 444    | 443  | -    | 363    | 384   | -     | -      | -    | -    | -      | -    | -    |
| Platoon blocked, %       |        |      |      |        |       |       |        | -    | -    |        | -    | -    |
| Mov Cap-1 Maneuver       | 88     | 112  | 389  | 93     | 118   | 485   | 830    | -    | -    | 934    | -    | -    |
| Mov Cap-2 Maneuver       | 88     | 112  | -    | 93     | 118   | -     | -      | -    | -    | -      | -    | -    |
| Stage 1                  | 357    | 379  | -    | 441    | 449   | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                  | 404    | 432  | -    | 345    | 377   | -     | -      | -    | -    | -      | -    | -    |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Approach                 | EB     |      |      | WB     |       |       | NB     |      |      | SB     |      |      |
| HCM Control Delay, s     | 35.9   |      |      | 64     |       |       | 0.3    |      |      | 0.2    |      |      |
| HCM LOS                  | E      |      |      | F      |       |       |        |      |      |        |      |      |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT  | NBR  | EBLn1  | WBLn1 | SBL   | SBT    | SBR  |      |        |      |      |
| Capacity (veh/h)         | 830    | -    | -    | 137    | 135   | 934   | -      | -    |      |        |      |      |
| HCM Lane V/C Ratio       | 0.022  | -    | -    | 0.151  | 0.588 | 0.019 | -      | -    |      |        |      |      |
| HCM Control Delay (s)    | 9.4    | -    | -    | 35.9   | 64    | 8.9   | -      | -    |      |        |      |      |
| HCM Lane LOS             | A      | -    | -    | E      | F     | A     | -      | -    |      |        |      |      |
| HCM 95th %tile Q(veh)    | 0.1    | -    | -    | 0.5    | 3     | 0.1   | -      | -    |      |        |      |      |

2018 AM Peak Hour  
w-o Project

Synchro 8 Report  
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HCM 2010 Signalized Intersection Summary  
4: SR29 & Pratt Ave

25/10/2016

|                                                                    |  |  |  |  |  |  |   |  |  |  |  |  |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                                                           | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations                                                |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |  |  |                                                                                     |  |  |                                                                                     |
| Volume (veh/h)                                                     | 8                                                                                 | 3                                                                                 | 8                                                                                 | 42                                                                                | 4                                                                                 | 27                                                                                | 17                                                                                  | 537                                                                                 | 70                                                                                  | 16                                                                                  | 732                                                                                 | 7                                                                                   |
| Number                                                             | 7                                                                                 | 4                                                                                 | 14                                                                                | 3                                                                                 | 8                                                                                 | 18                                                                                | 5                                                                                   | 2                                                                                   | 12                                                                                  | 1                                                                                   | 6                                                                                   | 16                                                                                  |
| Initial Q (Qb), veh                                                | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ped-Bike Adj(A_pbT)                                                | 0.98                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 0.94                                                                              | 1.00                                                                                |                                                                                     | 0.98                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Parking Bus, Adj                                                   | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Adj Sat Flow, veh/h/ln                                             | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                                | 1774                                                                                | 1900                                                                                | 1900                                                                                | 1793                                                                                | 1900                                                                                |
| Adj Flow Rate, veh/h                                               | 9                                                                                 | 3                                                                                 | 9                                                                                 | 46                                                                                | 4                                                                                 | 29                                                                                | 18                                                                                  | 584                                                                                 | 76                                                                                  | 17                                                                                  | 796                                                                                 | 8                                                                                   |
| Adj No. of Lanes                                                   | 0                                                                                 | 1                                                                                 | 0                                                                                 | 0                                                                                 | 1                                                                                 | 0                                                                                 | 1                                                                                   | 1                                                                                   | 0                                                                                   | 1                                                                                   | 1                                                                                   | 0                                                                                   |
| Peak Hour Factor                                                   | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                |
| Percent Heavy Veh, %                                               | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 8                                                                                   | 8                                                                                   | 0                                                                                   | 6                                                                                   | 6                                                                                   |
| Cap, veh/h                                                         | 196                                                                               | 27                                                                                | 59                                                                                | 232                                                                               | 6                                                                                 | 45                                                                                | 33                                                                                  | 865                                                                                 | 113                                                                                 | 31                                                                                  | 998                                                                                 | 10                                                                                  |
| Arrive On Green                                                    | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.02                                                                                | 0.56                                                                                | 0.56                                                                                | 0.02                                                                                | 0.56                                                                                | 0.56                                                                                |
| Sat Flow, veh/h                                                    | 639                                                                               | 339                                                                               | 734                                                                               | 890                                                                               | 77                                                                                | 561                                                                               | 1810                                                                                | 1534                                                                                | 200                                                                                 | 1810                                                                                | 1773                                                                                | 18                                                                                  |
| Grp Volume(v), veh/h                                               | 21                                                                                | 0                                                                                 | 0                                                                                 | 79                                                                                | 0                                                                                 | 0                                                                                 | 18                                                                                  | 0                                                                                   | 660                                                                                 | 17                                                                                  | 0                                                                                   | 804                                                                                 |
| Grp Sat Flow(s),veh/h/ln                                           | 1712                                                                              | 0                                                                                 | 0                                                                                 | 1529                                                                              | 0                                                                                 | 0                                                                                 | 1810                                                                                | 0                                                                                   | 1734                                                                                | 1810                                                                                | 0                                                                                   | 1790                                                                                |
| Q Serve(g_s), s                                                    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 1.3                                                                               | 0.0                                                                               | 0.0                                                                               | 0.3                                                                                 | 0.0                                                                                 | 9.5                                                                                 | 0.3                                                                                 | 0.0                                                                                 | 12.6                                                                                |
| Cycle Q Clear(g_c), s                                              | 0.4                                                                               | 0.0                                                                               | 0.0                                                                               | 1.7                                                                               | 0.0                                                                               | 0.0                                                                               | 0.3                                                                                 | 0.0                                                                                 | 9.5                                                                                 | 0.3                                                                                 | 0.0                                                                                 | 12.6                                                                                |
| Prop In Lane                                                       | 0.43                                                                              |                                                                                   | 0.43                                                                              | 0.58                                                                              |                                                                                   | 0.37                                                                              | 1.00                                                                                |                                                                                     | 0.12                                                                                | 1.00                                                                                |                                                                                     | 0.01                                                                                |
| Lane Grp Cap(c), veh/h                                             | 282                                                                               | 0                                                                                 | 0                                                                                 | 283                                                                               | 0                                                                                 | 0                                                                                 | 33                                                                                  | 0                                                                                   | 978                                                                                 | 31                                                                                  | 0                                                                                   | 1008                                                                                |
| V/C Ratio(X)                                                       | 0.07                                                                              | 0.00                                                                              | 0.00                                                                              | 0.28                                                                              | 0.00                                                                              | 0.00                                                                              | 0.54                                                                                | 0.00                                                                                | 0.67                                                                                | 0.54                                                                                | 0.00                                                                                | 0.80                                                                                |
| Avail Cap(c_a), veh/h                                              | 850                                                                               | 0                                                                                 | 0                                                                                 | 831                                                                               | 0                                                                                 | 0                                                                                 | 204                                                                                 | 0                                                                                   | 1369                                                                                | 204                                                                                 | 0                                                                                   | 1413                                                                                |
| HCM Platoon Ratio                                                  | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Upstream Filter(I)                                                 | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                |
| Uniform Delay (d), s/veh                                           | 15.2                                                                              | 0.0                                                                               | 0.0                                                                               | 15.8                                                                              | 0.0                                                                               | 0.0                                                                               | 17.3                                                                                | 0.0                                                                                 | 5.4                                                                                 | 17.3                                                                                | 0.0                                                                                 | 6.1                                                                                 |
| Incr Delay (d2), s/veh                                             | 0.1                                                                               | 0.0                                                                               | 0.0                                                                               | 0.5                                                                               | 0.0                                                                               | 0.0                                                                               | 13.1                                                                                | 0.0                                                                                 | 0.8                                                                                 | 13.6                                                                                | 0.0                                                                                 | 2.2                                                                                 |
| Initial Q Delay(d3),s/veh                                          | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln                                           | 0.2                                                                               | 0.0                                                                               | 0.0                                                                               | 0.8                                                                               | 0.0                                                                               | 0.0                                                                               | 0.3                                                                                 | 0.0                                                                                 | 4.6                                                                                 | 0.3                                                                                 | 0.0                                                                                 | 6.7                                                                                 |
| LnGrp Delay(d),s/veh                                               | 15.3                                                                              | 0.0                                                                               | 0.0                                                                               | 16.3                                                                              | 0.0                                                                               | 0.0                                                                               | 30.3                                                                                | 0.0                                                                                 | 6.3                                                                                 | 30.9                                                                                | 0.0                                                                                 | 8.4                                                                                 |
| LnGrp LOS                                                          | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | C                                                                                   |                                                                                     | A                                                                                   | C                                                                                   |                                                                                     | A                                                                                   |
| Approach Vol, veh/h                                                | 21                                                                                |                                                                                   |                                                                                   | 79                                                                                |                                                                                   |                                                                                   | 678                                                                                 |                                                                                     |                                                                                     | 821                                                                                 |                                                                                     |                                                                                     |
| Approach Delay, s/veh                                              | 15.3                                                                              |                                                                                   |                                                                                   | 16.3                                                                              |                                                                                   |                                                                                   | 6.9                                                                                 |                                                                                     |                                                                                     | 8.8                                                                                 |                                                                                     |                                                                                     |
| Approach LOS                                                       | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | A                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |                                                                                     |
| Timer                                                              | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7                                                                                   | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Assigned Phs                                                       | 1                                                                                 | 2                                                                                 |                                                                                   | 4                                                                                 | 5                                                                                 | 6                                                                                 |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s                                           | 4.6                                                                               | 24.0                                                                              |                                                                                   | 6.8                                                                               | 4.6                                                                               | 24.0                                                                              |                                                                                     | 6.8                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Change Period (Y+Rc), s                                            | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               | 4.0                                                                               |                                                                                     | 4.0                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Green Setting (Gmax),s                                         | 4.0                                                                               | 28.0                                                                              |                                                                                   | 16.0                                                                              | 4.0                                                                               | 28.0                                                                              |                                                                                     | 16.0                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1),s                                        | 2.3                                                                               | 11.5                                                                              |                                                                                   | 2.4                                                                               | 2.3                                                                               | 14.6                                                                              |                                                                                     | 3.7                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s                                            | 0.0                                                                               | 5.9                                                                               |                                                                                   | 0.2                                                                               | 0.0                                                                               | 5.3                                                                               |                                                                                     | 0.2                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Summary                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2010 Ctrl Delay                                                | 8.5                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2010 LOS                                                       | A                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Notes                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| User approved pedestrian interval to be less than phase max green. |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

2018 AM Peak Hour  
without Project with Signal

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HCM 2010 TWSC  
2: SR29 & Greystone

22/06/2016

| Intersection             |        |      |        |      |        |      |  |
|--------------------------|--------|------|--------|------|--------|------|--|
| Int Delay, s/veh         | 1.5    |      |        |      |        |      |  |
| Movement                 | EBL    | EBR  | NBL    | NBT  | SBT    | SBR  |  |
| Vol, veh/h               | 29     | 43   | 19     | 837  | 672    | 10   |  |
| Conflicting Peds, #/hr   | 0      | 0    | 0      | 0    | 0      | 0    |  |
| Sign Control             | Stop   | Stop | Free   | Free | Free   | Free |  |
| RT Channelized           | -      | None | -      | None | -      | None |  |
| Storage Length           | 0      | -    | 170    | -    | -      | -    |  |
| Veh in Median Storage, # | 0      | -    | -      | 0    | 0      | -    |  |
| Grade, %                 | 0      | -    | -      | 0    | 0      | -    |  |
| Peak Hour Factor         | 97     | 97   | 97     | 97   | 97     | 97   |  |
| Heavy Vehicles, %        | 0      | 0    | 0      | 2    | 2      | 0    |  |
| Mvmt Flow                | 30     | 44   | 20     | 863  | 693    | 10   |  |
| Major/Minor              | Minor2 |      | Major1 |      | Major2 |      |  |
| Conflicting Flow All     | 1600   | 698  | 703    | 0    | -      | 0    |  |
| Stage 1                  | 698    | -    | -      | -    | -      | -    |  |
| Stage 2                  | 902    | -    | -      | -    | -      | -    |  |
| Critical Hdwy            | 6.4    | 6.2  | 4.1    | -    | -      | -    |  |
| Critical Hdwy Stg 1      | 5.4    | -    | -      | -    | -      | -    |  |
| Critical Hdwy Stg 2      | 5.4    | -    | -      | -    | -      | -    |  |
| Follow-up Hdwy           | 3.5    | 3.3  | 2.2    | -    | -      | -    |  |
| Pot Cap-1 Maneuver       | 118    | 444  | 904    | -    | -      | -    |  |
| Stage 1                  | 497    | -    | -      | -    | -      | -    |  |
| Stage 2                  | 399    | -    | -      | -    | -      | -    |  |
| Platoon blocked, %       |        |      |        | -    | -      | -    |  |
| Mov Cap-1 Maneuver       | 115    | 444  | 904    | -    | -      | -    |  |
| Mov Cap-2 Maneuver       | 115    | -    | -      | -    | -      | -    |  |
| Stage 1                  | 497    | -    | -      | -    | -      | -    |  |
| Stage 2                  | 390    | -    | -      | -    | -      | -    |  |
| Approach                 | EB     |      | NB     |      | SB     |      |  |
| HCM Control Delay, s     | 32     |      | 0.2    |      | 0      |      |  |
| HCM LOS                  | D      |      |        |      |        |      |  |
| Minor Lane/Major Mvmt    | NBL    | NB   | EBLn1  | SBT  | SBR    |      |  |
| Capacity (veh/h)         | 904    | -    | 206    | -    | -      |      |  |
| HCM Lane V/C Ratio       | 0.022  | -    | 0.36   | -    | -      |      |  |
| HCM Control Delay (s)    | 9.1    | -    | 32     | -    | -      |      |  |
| HCM Lane LOS             | A      | -    | D      | -    | -      |      |  |
| HCM 95th %tile Q(veh)    | 0.1    | -    | 1.5    | -    | -      |      |  |

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HCM 2010 TWSC  
4: SR29 & Pratt Ave

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| Intersection             |        |      |      |        |       |       |        |      |      |        |      |      |
|--------------------------|--------|------|------|--------|-------|-------|--------|------|------|--------|------|------|
| Int Delay, s/veh         | 4.7    |      |      |        |       |       |        |      |      |        |      |      |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Movement                 | EBL    | EBT  | EBR  | WBL    | WBT   | WBR   | NBL    | NBT  | NBR  | SBL    | SBT  | SBR  |
| Vol, veh/h               | 7      | 4    | 16   | 37     | 4     | 30    | 13     | 792  | 48   | 28     | 704  | 9    |
| Conflicting Peds, #/hr   | 0      | 0    | 0    | 5      | 0     | 5     | 0      | 0    | 0    | 0      | 0    | 0    |
| Sign Control             | Stop   | Stop | Stop | Stop   | Stop  | Stop  | Free   | Free | Free | Free   | Free | Free |
| RT Channelized           | -      | -    | None | -      | -     | None  | -      | -    | None | -      | -    | None |
| Storage Length           | -      | -    | -    | -      | -     | -     | 75     | -    | -    | 70     | -    | -    |
| Veh in Median Storage, # | -      | 0    | -    | -      | 0     | -     | -      | 0    | -    | -      | 0    | -    |
| Grade, %                 | -      | 0    | -    | -      | 0     | -     | -      | 0    | -    | -      | 0    | -    |
| Peak Hour Factor         | 97     | 97   | 97   | 97     | 97    | 97    | 97     | 97   | 97   | 97     | 97   | 97   |
| Heavy Vehicles, %        | 0      | 0    | 0    | 0      | 0     | 0     | 0      | 2    | 0    | 0      | 2    | 0    |
| Mvmt Flow                | 7      | 4    | 16   | 38     | 4     | 31    | 13     | 816  | 49   | 29     | 726  | 9    |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Major/Minor              | Minor2 |      |      | Minor1 |       |       | Major1 |      |      | Major2 |      |      |
| Conflicting Flow All     | 1679   | 1686 | 730  | 1671   | 1666  | 846   | 735    | 0    | 0    | 871    | 0    | 0    |
| Stage 1                  | 788    | 788  | -    | 873    | 873   | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                  | 891    | 898  | -    | 798    | 793   | -     | -      | -    | -    | -      | -    | -    |
| Critical Hdwy            | 7.1    | 6.5  | 6.2  | 7.1    | 6.5   | 6.2   | 4.1    | -    | -    | 4.1    | -    | -    |
| Critical Hdwy Stg 1      | 6.1    | 5.5  | -    | 6.1    | 5.5   | -     | -      | -    | -    | -      | -    | -    |
| Critical Hdwy Stg 2      | 6.1    | 5.5  | -    | 6.1    | 5.5   | -     | -      | -    | -    | -      | -    | -    |
| Follow-up Hdwy           | 3.5    | 4    | 3.3  | 3.5    | 4     | 3.3   | 2.2    | -    | -    | 2.2    | -    | -    |
| Pot Cap-1 Maneuver       | 76     | 95   | 426  | 77     | 98    | 365   | 879    | -    | -    | 783    | -    | -    |
| Stage 1                  | 387    | 405  | -    | 348    | 370   | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                  | 340    | 361  | -    | 382    | 403   | -     | -      | -    | -    | -      | -    | -    |
| Platoon blocked, %       |        |      |      |        |       |       |        | -    | -    |        | -    | -    |
| Mov Cap-1 Maneuver       | 65     | 90   | 426  | 68     | 93    | 363   | 879    | -    | -    | 783    | -    | -    |
| Mov Cap-2 Maneuver       | 65     | 90   | -    | 68     | 93    | -     | -      | -    | -    | -      | -    | -    |
| Stage 1                  | 381    | 390  | -    | 341    | 363   | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                  | 303    | 354  | -    | 350    | 388   | -     | -      | -    | -    | -      | -    | -    |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Approach                 | EB     |      |      | WB     |       |       | NB     |      |      | SB     |      |      |
| HCM Control Delay, s     | 36.4   |      |      | 93.4   |       |       | 0.1    |      |      | 0.4    |      |      |
| HCM LOS                  | E      |      |      | F      |       |       |        |      |      |        |      |      |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT  | NBR  | EBLn1  | WBLn1 | SBL   | SBT    | SBR  |      |        |      |      |
| Capacity (veh/h)         | 879    | -    | -    | 142    | 106   | 783   | -      | -    |      |        |      |      |
| HCM Lane V/C Ratio       | 0.015  | -    | -    | 0.196  | 0.691 | 0.037 | -      | -    |      |        |      |      |
| HCM Control Delay (s)    | 9.2    | -    | -    | 36.4   | 93.4  | 9.8   | -      | -    |      |        |      |      |
| HCM Lane LOS             | A      | -    | -    | E      | F     | A     | -      | -    |      |        |      |      |
| HCM 95th %tile Q(veh)    | 0      | -    | -    | 0.7    | 3.6   | 0.1   | -      | -    |      |        |      |      |

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|                             |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                    | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations         |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |  |  |                                                                                     |  |  |                                                                                     |
| Volume (veh/h)              | 7                                                                                 | 4                                                                                 | 16                                                                                | 37                                                                                | 4                                                                                 | 30                                                                                | 13                                                                                 | 792                                                                                 | 48                                                                                  | 28                                                                                  | 704                                                                                 | 9                                                                                   |
| Number                      | 7                                                                                 | 4                                                                                 | 14                                                                                | 3                                                                                 | 8                                                                                 | 18                                                                                | 5                                                                                  | 2                                                                                   | 12                                                                                  | 1                                                                                   | 6                                                                                   | 16                                                                                  |
| Initial Q (Qb), veh         | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ped-Bike Adj(A_pbT)         | 0.98                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 0.94                                                                              | 1.00                                                                               |                                                                                     | 0.98                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Parking Bus, Adj            | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Adj Sat Flow, veh/h/ln      | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                               | 1865                                                                                | 1900                                                                                | 1900                                                                                | 1863                                                                                | 1900                                                                                |
| Adj Flow Rate, veh/h        | 7                                                                                 | 4                                                                                 | 16                                                                                | 38                                                                                | 4                                                                                 | 31                                                                                | 13                                                                                 | 816                                                                                 | 49                                                                                  | 29                                                                                  | 726                                                                                 | 9                                                                                   |
| Adj No. of Lanes            | 0                                                                                 | 1                                                                                 | 0                                                                                 | 0                                                                                 | 1                                                                                 | 0                                                                                 | 1                                                                                  | 1                                                                                   | 0                                                                                   | 1                                                                                   | 1                                                                                   | 0                                                                                   |
| Peak Hour Factor            | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                               | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                |
| Percent Heavy Veh, %        | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 2                                                                                   | 2                                                                                   | 0                                                                                   | 2                                                                                   | 2                                                                                   |
| Cap, veh/h                  | 149                                                                               | 26                                                                                | 79                                                                                | 208                                                                               | 7                                                                                 | 51                                                                                | 24                                                                                 | 1002                                                                                | 60                                                                                  | 50                                                                                  | 1085                                                                                | 13                                                                                  |
| Arrive On Green             | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.01                                                                               | 0.58                                                                                | 0.58                                                                                | 0.03                                                                                | 0.59                                                                                | 0.59                                                                                |
| Sat Flow, veh/h             | 369                                                                               | 329                                                                               | 1015                                                                              | 806                                                                               | 85                                                                                | 657                                                                               | 1810                                                                               | 1739                                                                                | 104                                                                                 | 1810                                                                                | 1836                                                                                | 23                                                                                  |
| Grp Volume(v), veh/h        | 27                                                                                | 0                                                                                 | 0                                                                                 | 73                                                                                | 0                                                                                 | 0                                                                                 | 13                                                                                 | 0                                                                                   | 865                                                                                 | 29                                                                                  | 0                                                                                   | 735                                                                                 |
| Grp Sat Flow(s),veh/h/ln    | 1714                                                                              | 0                                                                                 | 0                                                                                 | 1548                                                                              | 0                                                                                 | 0                                                                                 | 1810                                                                               | 0                                                                                   | 1843                                                                                | 1810                                                                                | 0                                                                                   | 1859                                                                                |
| Q Serve(g_s), s             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 1.1                                                                               | 0.0                                                                               | 0.0                                                                               | 0.3                                                                                | 0.0                                                                                 | 14.1                                                                                | 0.6                                                                                 | 0.0                                                                                 | 10.1                                                                                |
| Cycle Q Clear(g_c), s       | 0.6                                                                               | 0.0                                                                               | 0.0                                                                               | 1.7                                                                               | 0.0                                                                               | 0.0                                                                               | 0.3                                                                                | 0.0                                                                                 | 14.1                                                                                | 0.6                                                                                 | 0.0                                                                                 | 10.1                                                                                |
| Prop In Lane                | 0.26                                                                              |                                                                                   | 0.59                                                                              | 0.52                                                                              |                                                                                   | 0.42                                                                              | 1.00                                                                               |                                                                                     | 0.06                                                                                | 1.00                                                                                |                                                                                     | 0.01                                                                                |
| Lane Grp Cap(c), veh/h      | 254                                                                               | 0                                                                                 | 0                                                                                 | 266                                                                               | 0                                                                                 | 0                                                                                 | 24                                                                                 | 0                                                                                   | 1062                                                                                | 50                                                                                  | 0                                                                                   | 1098                                                                                |
| V/C Ratio(X)                | 0.11                                                                              | 0.00                                                                              | 0.00                                                                              | 0.27                                                                              | 0.00                                                                              | 0.00                                                                              | 0.53                                                                               | 0.00                                                                                | 0.81                                                                                | 0.58                                                                                | 0.00                                                                                | 0.67                                                                                |
| Avail Cap(c_a), veh/h       | 798                                                                               | 0                                                                                 | 0                                                                                 | 776                                                                               | 0                                                                                 | 0                                                                                 | 192                                                                                | 0                                                                                   | 1367                                                                                | 192                                                                                 | 0                                                                                   | 1378                                                                                |
| HCM Platoon Ratio           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Upstream Filter(I)          | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                               | 0.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                |
| Uniform Delay (d), s/veh    | 16.3                                                                              | 0.0                                                                               | 0.0                                                                               | 16.8                                                                              | 0.0                                                                               | 0.0                                                                               | 18.5                                                                               | 0.0                                                                                 | 6.4                                                                                 | 18.1                                                                                | 0.0                                                                                 | 5.2                                                                                 |
| Incr Delay (d2), s/veh      | 0.2                                                                               | 0.0                                                                               | 0.0                                                                               | 0.6                                                                               | 0.0                                                                               | 0.0                                                                               | 16.8                                                                               | 0.0                                                                                 | 3.0                                                                                 | 10.0                                                                                | 0.0                                                                                 | 0.9                                                                                 |
| Initial Q Delay(d3),s/veh   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln    | 0.3                                                                               | 0.0                                                                               | 0.0                                                                               | 0.8                                                                               | 0.0                                                                               | 0.0                                                                               | 0.2                                                                                | 0.0                                                                                 | 7.9                                                                                 | 0.4                                                                                 | 0.0                                                                                 | 5.2                                                                                 |
| LnGrp Delay(d),s/veh        | 16.5                                                                              | 0.0                                                                               | 0.0                                                                               | 17.3                                                                              | 0.0                                                                               | 0.0                                                                               | 35.3                                                                               | 0.0                                                                                 | 9.4                                                                                 | 28.2                                                                                | 0.0                                                                                 | 6.1                                                                                 |
| LnGrp LOS                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | D                                                                                  |                                                                                     | A                                                                                   | C                                                                                   |                                                                                     | A                                                                                   |
| Approach Vol, veh/h         | 27                                                                                |                                                                                   |                                                                                   | 73                                                                                |                                                                                   |                                                                                   | 878                                                                                |                                                                                     |                                                                                     | 764                                                                                 |                                                                                     |                                                                                     |
| Approach Delay, s/veh       | 16.5                                                                              |                                                                                   |                                                                                   | 17.3                                                                              |                                                                                   |                                                                                   | 9.8                                                                                |                                                                                     |                                                                                     | 7.0                                                                                 |                                                                                     |                                                                                     |
| Approach LOS                | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | A                                                                                  |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |                                                                                     |
| Timer                       | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7                                                                                  | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Assigned Phs                | 1                                                                                 | 2                                                                                 |                                                                                   | 4                                                                                 | 5                                                                                 | 6                                                                                 |                                                                                    | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s    | 5.0                                                                               | 25.8                                                                              |                                                                                   | 7.0                                                                               | 4.5                                                                               | 26.3                                                                              |                                                                                    | 7.0                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Change Period (Y+Rc), s     | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               | 4.0                                                                               |                                                                                    | 4.0                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Green Setting (Gmax),s  | 4.0                                                                               | 28.0                                                                              |                                                                                   | 16.0                                                                              | 4.0                                                                               | 28.0                                                                              |                                                                                    | 16.0                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1),s | 4.0                                                                               | 16.1                                                                              |                                                                                   | 2.6                                                                               | 2.3                                                                               | 12.1                                                                              |                                                                                    | 3.7                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s     | 0.0                                                                               | 5.6                                                                               |                                                                                   | 0.2                                                                               | 0.0                                                                               | 6.6                                                                               |                                                                                    | 0.2                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2010 Ctrl Delay         |                                                                                   |                                                                                   |                                                                                   | 9.0                                                                               |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2010 LOS                |                                                                                   |                                                                                   |                                                                                   | A                                                                                 |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

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| Intersection             |        |      |        |      |        |      |  |
|--------------------------|--------|------|--------|------|--------|------|--|
| Int Delay, s/veh         | 0.4    |      |        |      |        |      |  |
| Movement                 | EBL    | EBR  | NBL    | NBT  | SBT    | SBR  |  |
| Vol, veh/h               | 4      | 6    | 28     | 536  | 707    | 17   |  |
| Conflicting Peds, #/hr   | 0      | 0    | 0      | 0    | 0      | 0    |  |
| Sign Control             | Stop   | Stop | Free   | Free | Free   | Free |  |
| RT Channelized           | -      | None | -      | None | -      | None |  |
| Storage Length           | 0      | -    | 170    | -    | -      | -    |  |
| Veh in Median Storage, # | 0      | -    | -      | 0    | 0      | -    |  |
| Grade, %                 | 0      | -    | -      | 0    | 0      | -    |  |
| Peak Hour Factor         | 92     | 92   | 92     | 92   | 92     | 92   |  |
| Heavy Vehicles, %        | 0      | 0    | 0      | 8    | 6      | 0    |  |
| Mvmt Flow                | 4      | 7    | 30     | 583  | 768    | 18   |  |
| Major/Minor              | Minor2 |      | Major1 |      | Major2 |      |  |
| Conflicting Flow All     | 1421   | 778  | 787    | 0    | -      | 0    |  |
| Stage 1                  | 778    | -    | -      | -    | -      | -    |  |
| Stage 2                  | 643    | -    | -      | -    | -      | -    |  |
| Critical Hdwy            | 6.4    | 6.2  | 4.1    | -    | -      | -    |  |
| Critical Hdwy Stg 1      | 5.4    | -    | -      | -    | -      | -    |  |
| Critical Hdwy Stg 2      | 5.4    | -    | -      | -    | -      | -    |  |
| Follow-up Hdwy           | 3.5    | 3.3  | 2.2    | -    | -      | -    |  |
| Pot Cap-1 Maneuver       | 152    | 400  | 841    | -    | -      | -    |  |
| Stage 1                  | 456    | -    | -      | -    | -      | -    |  |
| Stage 2                  | 527    | -    | -      | -    | -      | -    |  |
| Platoon blocked, %       |        |      |        | -    | -      | -    |  |
| Mov Cap-1 Maneuver       | 147    | 400  | 841    | -    | -      | -    |  |
| Mov Cap-2 Maneuver       | 147    | -    | -      | -    | -      | -    |  |
| Stage 1                  | 456    | -    | -      | -    | -      | -    |  |
| Stage 2                  | 508    | -    | -      | -    | -      | -    |  |
| Approach                 | EB     |      | NB     |      | SB     |      |  |
| HCM Control Delay, s     | 20.9   |      | 0.5    |      | 0      |      |  |
| HCM LOS                  | C      |      |        |      |        |      |  |
| Minor Lane/Major Mvmt    | NBL    | NB   | EBLn1  | SBT  | SBR    |      |  |
| Capacity (veh/h)         | 841    | -    | 237    | -    | -      |      |  |
| HCM Lane V/C Ratio       | 0.036  | -    | 0.046  | -    | -      |      |  |
| HCM Control Delay (s)    | 9.4    | -    | 20.9   | -    | -      |      |  |
| HCM Lane LOS             | A      | -    | C      | -    | -      |      |  |
| HCM 95th %tile Q(veh)    | 0.1    | -    | 0.1    | -    | -      |      |  |

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| Intersection             |        |      |      |        |       |       |        |      |      |        |      |      |
|--------------------------|--------|------|------|--------|-------|-------|--------|------|------|--------|------|------|
| Int Delay, s/veh         | 4.1    |      |      |        |       |       |        |      |      |        |      |      |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Movement                 | EBL    | EBT  | EBR  | WBL    | WBT   | WBR   | NBL    | NBT  | NBR  | SBL    | SBT  | SBR  |
| Vol, veh/h               | 8      | 3    | 8    | 45     | 4     | 28    | 17     | 523  | 70   | 16     | 730  | 7    |
| Conflicting Peds, #/hr   | 0      | 0    | 0    | 5      | 0     | 5     | 0      | 0    | 0    | 0      | 0    | 0    |
| Sign Control             | Stop   | Stop | Stop | Stop   | Stop  | Stop  | Free   | Free | Free | Free   | Free | Free |
| RT Channelized           | -      | -    | None | -      | -     | None  | -      | -    | None | -      | -    | None |
| Storage Length           | -      | -    | -    | -      | -     | -     | 0      | -    | -    | 70     | -    | -    |
| Veh in Median Storage, # | -      | 0    | -    | -      | 0     | -     | -      | 0    | -    | -      | 0    | -    |
| Grade, %                 | -      | 0    | -    | -      | 0     | -     | -      | 0    | -    | -      | 0    | -    |
| Peak Hour Factor         | 92     | 92   | 92   | 92     | 92    | 92    | 92     | 92   | 92   | 92     | 92   | 92   |
| Heavy Vehicles, %        | 0      | 0    | 0    | 0      | 0     | 0     | 0      | 8    | 0    | 0      | 6    | 0    |
| Mvmt Flow                | 9      | 3    | 9    | 49     | 4     | 30    | 18     | 568  | 76   | 17     | 793  | 8    |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Major/Minor              | Minor2 |      |      | Minor1 |       |       | Major1 |      |      | Major2 |      |      |
| Conflicting Flow All     | 1498   | 1519 | 797  | 1486   | 1484  | 612   | 801    | 0    | 0    | 650    | 0    | 0    |
| Stage 1                  | 832    | 832  | -    | 648    | 648   | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                  | 666    | 687  | -    | 838    | 836   | -     | -      | -    | -    | -      | -    | -    |
| Critical Hdwy            | 7.1    | 6.5  | 6.2  | 7.1    | 6.5   | 6.2   | 4.1    | -    | -    | 4.1    | -    | -    |
| Critical Hdwy Stg 1      | 6.1    | 5.5  | -    | 6.1    | 5.5   | -     | -      | -    | -    | -      | -    | -    |
| Critical Hdwy Stg 2      | 6.1    | 5.5  | -    | 6.1    | 5.5   | -     | -      | -    | -    | -      | -    | -    |
| Follow-up Hdwy           | 3.5    | 4    | 3.3  | 3.5    | 4     | 3.3   | 2.2    | -    | -    | 2.2    | -    | -    |
| Pot Cap-1 Maneuver       | 102    | 120  | 390  | 104    | 126   | 497   | 831    | -    | -    | 946    | -    | -    |
| Stage 1                  | 366    | 387  | -    | 462    | 469   | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                  | 452    | 450  | -    | 364    | 385   | -     | -      | -    | -    | -      | -    | -    |
| Platoon blocked, %       |        |      |      |        |       |       |        | -    | -    |        | -    | -    |
| Mov Cap-1 Maneuver       | 90     | 115  | 390  | 96     | 121   | 495   | 831    | -    | -    | 946    | -    | -    |
| Mov Cap-2 Maneuver       | 90     | 115  | -    | 96     | 121   | -     | -      | -    | -    | -      | -    | -    |
| Stage 1                  | 358    | 380  | -    | 450    | 457   | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                  | 411    | 438  | -    | 346    | 378   | -     | -      | -    | -    | -      | -    | -    |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Approach                 | EB     |      |      | WB     |       |       | NB     |      |      | SB     |      |      |
| HCM Control Delay, s     | 35.1   |      |      | 64.9   |       |       | 0.3    |      |      | 0.2    |      |      |
| HCM LOS                  | E      |      |      | F      |       |       |        |      |      |        |      |      |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT  | NBR  | EBLn1  | WBLn1 | SBL   | SBT    | SBR  |      |        |      |      |
| Capacity (veh/h)         | 831    | -    | -    | 140    | 138   | 946   | -      | -    |      |        |      |      |
| HCM Lane V/C Ratio       | 0.022  | -    | -    | 0.148  | 0.606 | 0.018 | -      | -    |      |        |      |      |
| HCM Control Delay (s)    | 9.4    | -    | -    | 35.1   | 64.9  | 8.9   | -      | -    |      |        |      |      |
| HCM Lane LOS             | A      | -    | -    | E      | F     | A     | -      | -    |      |        |      |      |
| HCM 95th %tile Q(veh)    | 0.1    | -    | -    | 0.5    | 3.2   | 0.1   | -      | -    |      |        |      |      |

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| Intersection             |        |        |       |        |      |      |  |
|--------------------------|--------|--------|-------|--------|------|------|--|
| Int Delay, s/veh         | 0.9    |        |       |        |      |      |  |
| Movement                 | EBL    | EBR    | NBL   | NBT    | SBT  | SBR  |  |
| Vol, veh/h               | 19     | 28     | 12    | 838    | 672  | 7    |  |
| Conflicting Peds, #/hr   | 0      | 0      | 0     | 0      | 0    | 0    |  |
| Sign Control             | Stop   | Stop   | Free  | Free   | Free | Free |  |
| RT Channelized           | -      | None   | -     | None   | -    | None |  |
| Storage Length           | 0      | -      | 170   | -      | -    | -    |  |
| Veh in Median Storage, # | 0      | -      | -     | 0      | 0    | -    |  |
| Grade, %                 | 0      | -      | -     | 0      | 0    | -    |  |
| Peak Hour Factor         | 97     | 97     | 97    | 97     | 97   | 97   |  |
| Heavy Vehicles, %        | 0      | 0      | 0     | 2      | 2    | 0    |  |
| Mvmt Flow                | 20     | 29     | 12    | 864    | 693  | 7    |  |
| Major/Minor              | Minor2 | Major1 |       | Major2 |      |      |  |
| Conflicting Flow All     | 1585   | 696    | 700   | 0      | -    | 0    |  |
| Stage 1                  | 696    | -      | -     | -      | -    | -    |  |
| Stage 2                  | 889    | -      | -     | -      | -    | -    |  |
| Critical Hdwy            | 6.4    | 6.2    | 4.1   | -      | -    | -    |  |
| Critical Hdwy Stg 1      | 5.4    | -      | -     | -      | -    | -    |  |
| Critical Hdwy Stg 2      | 5.4    | -      | -     | -      | -    | -    |  |
| Follow-up Hdwy           | 3.5    | 3.3    | 2.2   | -      | -    | -    |  |
| Pot Cap-1 Maneuver       | 120    | 445    | 906   | -      | -    | -    |  |
| Stage 1                  | 498    | -      | -     | -      | -    | -    |  |
| Stage 2                  | 405    | -      | -     | -      | -    | -    |  |
| Platoon blocked, %       |        |        |       | -      | -    | -    |  |
| Mov Cap-1 Maneuver       | 118    | 445    | 906   | -      | -    | -    |  |
| Mov Cap-2 Maneuver       | 118    | -      | -     | -      | -    | -    |  |
| Stage 1                  | 498    | -      | -     | -      | -    | -    |  |
| Stage 2                  | 400    | -      | -     | -      | -    | -    |  |
| Approach                 | EB     | NB     |       | SB     |      |      |  |
| HCM Control Delay, s     | 27.2   | 0.1    |       | 0      |      |      |  |
| HCM LOS                  | D      |        |       |        |      |      |  |
| Minor Lane/Major Mvmt    | NBL    | NB     | EBLn1 | SBT    | SBR  |      |  |
| Capacity (veh/h)         | 906    | -      | 210   | -      | -    |      |  |
| HCM Lane V/C Ratio       | 0.014  | -      | 0.231 | -      | -    |      |  |
| HCM Control Delay (s)    | 9      | -      | 27.2  | -      | -    |      |  |
| HCM Lane LOS             | A      | -      | D     | -      | -    |      |  |
| HCM 95th %tile Q(veh)    | 0      | -      | 0.9   | -      | -    |      |  |

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| Intersection             |        |      |      |        |       |       |        |      |      |        |      |      |
|--------------------------|--------|------|------|--------|-------|-------|--------|------|------|--------|------|------|
| Int Delay, s/veh         | 5      |      |      |        |       |       |        |      |      |        |      |      |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Movement                 | EBL    | EBT  | EBR  | WBL    | WBT   | WBR   | NBL    | NBT  | NBR  | SBL    | SBT  | SBR  |
| Vol, veh/h               | 7      | 4    | 16   | 40     | 4     | 31    | 13     | 785  | 52   | 28     | 689  | 9    |
| Conflicting Peds, #/hr   | 0      | 0    | 0    | 5      | 0     | 5     | 0      | 0    | 0    | 0      | 0    | 0    |
| Sign Control             | Stop   | Stop | Stop | Stop   | Stop  | Stop  | Free   | Free | Free | Free   | Free | Free |
| RT Channelized           | -      | -    | None | -      | -     | None  | -      | -    | None | -      | -    | None |
| Storage Length           | -      | -    | -    | -      | -     | -     | 75     | -    | -    | 70     | -    | -    |
| Veh in Median Storage, # | -      | 0    | -    | -      | 0     | -     | -      | 0    | -    | -      | 0    | -    |
| Grade, %                 | -      | 0    | -    | -      | 0     | -     | -      | 0    | -    | -      | 0    | -    |
| Peak Hour Factor         | 97     | 97   | 97   | 97     | 97    | 97    | 97     | 97   | 97   | 97     | 97   | 97   |
| Heavy Vehicles, %        | 0      | 0    | 0    | 0      | 0     | 0     | 0      | 2    | 0    | 0      | 2    | 0    |
| Mvmt Flow                | 7      | 4    | 16   | 41     | 4     | 32    | 13     | 809  | 54   | 29     | 710  | 9    |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Major/Minor              | Minor2 |      |      | Minor1 |       |       | Major1 |      |      | Major2 |      |      |
| Conflicting Flow All     | 1659   | 1668 | 715  | 1651   | 1645  | 841   | 720    | 0    | 0    | 868    | 0    | 0    |
| Stage 1                  | 773    | 773  | -    | 868    | 868   | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                  | 886    | 895  | -    | 783    | 777   | -     | -      | -    | -    | -      | -    | -    |
| Critical Hdwy            | 7.1    | 6.5  | 6.2  | 7.1    | 6.5   | 6.2   | 4.1    | -    | -    | 4.1    | -    | -    |
| Critical Hdwy Stg 1      | 6.1    | 5.5  | -    | 6.1    | 5.5   | -     | -      | -    | -    | -      | -    | -    |
| Critical Hdwy Stg 2      | 6.1    | 5.5  | -    | 6.1    | 5.5   | -     | -      | -    | -    | -      | -    | -    |
| Follow-up Hdwy           | 3.5    | 4    | 3.3  | 3.5    | 4     | 3.3   | 2.2    | -    | -    | 2.2    | -    | -    |
| Pot Cap-1 Maneuver       | 79     | 97   | 434  | 80     | 101   | 368   | 891    | -    | -    | 785    | -    | -    |
| Stage 1                  | 395    | 412  | -    | 350    | 372   | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                  | 342    | 362  | -    | 390    | 410   | -     | -      | -    | -    | -      | -    | -    |
| Platoon blocked, %       |        |      |      |        |       |       |        | -    | -    |        | -    | -    |
| Mov Cap-1 Maneuver       | 67     | 92   | 434  | 71     | 95    | 366   | 891    | -    | -    | 785    | -    | -    |
| Mov Cap-2 Maneuver       | 67     | 92   | -    | 71     | 95    | -     | -      | -    | -    | -      | -    | -    |
| Stage 1                  | 389    | 397  | -    | 343    | 365   | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                  | 304    | 355  | -    | 358    | 395   | -     | -      | -    | -    | -      | -    | -    |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Approach                 | EB     |      |      | WB     |       |       | NB     |      |      | SB     |      |      |
| HCM Control Delay, s     | 35.4   |      |      | 94.4   |       |       | 0.1    |      |      | 0.4    |      |      |
| HCM LOS                  | E      |      |      | F      |       |       |        |      |      |        |      |      |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT  | NBR  | EBLn1  | WBLn1 | SBL   | SBT    | SBR  |      |        |      |      |
| Capacity (veh/h)         | 891    | -    | -    | 146    | 109   | 785   | -      | -    |      |        |      |      |
| HCM Lane V/C Ratio       | 0.015  | -    | -    | 0.191  | 0.709 | 0.037 | -      | -    |      |        |      |      |
| HCM Control Delay (s)    | 9.1    | -    | -    | 35.4   | 94.4  | 9.8   | -      | -    |      |        |      |      |
| HCM Lane LOS             | A      | -    | -    | E      | F     | A     | -      | -    |      |        |      |      |
| HCM 95th %tile Q(veh)    | 0      | -    | -    | 0.7    | 3.8   | 0.1   | -      | -    |      |        |      |      |

2018 PM Peak Hour  
with Project No Signal

Synchro 8 Report  
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HCM 2010 Signalized Intersection Summary  
4: SR29 & Pratt Ave

22/06/2016

|                             |  |  |  |  |  |  |   |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                    | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations         |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |  |  |                                                                                     |  |  |                                                                                     |
| Volume (veh/h)              | 7                                                                                 | 4                                                                                 | 16                                                                                | 40                                                                                | 4                                                                                 | 31                                                                                | 13                                                                                  | 785                                                                                 | 52                                                                                  | 28                                                                                  | 689                                                                                 | 9                                                                                   |
| Number                      | 7                                                                                 | 4                                                                                 | 14                                                                                | 3                                                                                 | 8                                                                                 | 18                                                                                | 5                                                                                   | 2                                                                                   | 12                                                                                  | 1                                                                                   | 6                                                                                   | 16                                                                                  |
| Initial Q (Qb), veh         | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ped-Bike Adj(A_pbT)         | 0.98                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 0.94                                                                              | 1.00                                                                                |                                                                                     | 0.98                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Parking Bus, Adj            | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Adj Sat Flow, veh/h/ln      | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                                | 1865                                                                                | 1900                                                                                | 1900                                                                                | 1863                                                                                | 1900                                                                                |
| Adj Flow Rate, veh/h        | 7                                                                                 | 4                                                                                 | 16                                                                                | 41                                                                                | 4                                                                                 | 32                                                                                | 13                                                                                  | 809                                                                                 | 54                                                                                  | 29                                                                                  | 710                                                                                 | 9                                                                                   |
| Adj No. of Lanes            | 0                                                                                 | 1                                                                                 | 0                                                                                 | 0                                                                                 | 1                                                                                 | 0                                                                                 | 1                                                                                   | 1                                                                                   | 0                                                                                   | 1                                                                                   | 1                                                                                   | 0                                                                                   |
| Peak Hour Factor            | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                |
| Percent Heavy Veh, %        | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 2                                                                                   | 2                                                                                   | 0                                                                                   | 2                                                                                   | 2                                                                                   |
| Cap, veh/h                  | 149                                                                               | 27                                                                                | 81                                                                                | 212                                                                               | 6                                                                                 | 51                                                                                | 24                                                                                  | 992                                                                                 | 66                                                                                  | 50                                                                                  | 1081                                                                                | 14                                                                                  |
| Arrive On Green             | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.01                                                                                | 0.57                                                                                | 0.57                                                                                | 0.03                                                                                | 0.59                                                                                | 0.59                                                                                |
| Sat Flow, veh/h             | 364                                                                               | 336                                                                               | 1018                                                                              | 822                                                                               | 80                                                                                | 642                                                                               | 1810                                                                                | 1726                                                                                | 115                                                                                 | 1810                                                                                | 1836                                                                                | 23                                                                                  |
| Grp Volume(v), veh/h        | 27                                                                                | 0                                                                                 | 0                                                                                 | 77                                                                                | 0                                                                                 | 0                                                                                 | 13                                                                                  | 0                                                                                   | 863                                                                                 | 29                                                                                  | 0                                                                                   | 719                                                                                 |
| Grp Sat Flow(s),veh/h/ln    | 1719                                                                              | 0                                                                                 | 0                                                                                 | 1545                                                                              | 0                                                                                 | 0                                                                                 | 1810                                                                                | 0                                                                                   | 1841                                                                                | 1810                                                                                | 0                                                                                   | 1859                                                                                |
| Q Serve(g_s), s             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 1.2                                                                               | 0.0                                                                               | 0.0                                                                               | 0.3                                                                                 | 0.0                                                                                 | 14.2                                                                                | 0.6                                                                                 | 0.0                                                                                 | 9.8                                                                                 |
| Cycle Q Clear(g_c), s       | 0.6                                                                               | 0.0                                                                               | 0.0                                                                               | 1.8                                                                               | 0.0                                                                               | 0.0                                                                               | 0.3                                                                                 | 0.0                                                                                 | 14.2                                                                                | 0.6                                                                                 | 0.0                                                                                 | 9.8                                                                                 |
| Prop In Lane                | 0.26                                                                              |                                                                                   | 0.59                                                                              | 0.53                                                                              |                                                                                   | 0.42                                                                              | 1.00                                                                                |                                                                                     | 0.06                                                                                | 1.00                                                                                |                                                                                     | 0.01                                                                                |
| Lane Grp Cap(c), veh/h      | 257                                                                               | 0                                                                                 | 0                                                                                 | 269                                                                               | 0                                                                                 | 0                                                                                 | 24                                                                                  | 0                                                                                   | 1058                                                                                | 50                                                                                  | 0                                                                                   | 1095                                                                                |
| V/C Ratio(X)                | 0.11                                                                              | 0.00                                                                              | 0.00                                                                              | 0.29                                                                              | 0.00                                                                              | 0.00                                                                              | 0.53                                                                                | 0.00                                                                                | 0.82                                                                                | 0.58                                                                                | 0.00                                                                                | 0.66                                                                                |
| Avail Cap(c_a), veh/h       | 799                                                                               | 0                                                                                 | 0                                                                                 | 777                                                                               | 0                                                                                 | 0                                                                                 | 192                                                                                 | 0                                                                                   | 1365                                                                                | 192                                                                                 | 0                                                                                   | 1378                                                                                |
| HCM Platoon Ratio           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Upstream Filter(I)          | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                |
| Uniform Delay (d), s/veh    | 16.2                                                                              | 0.0                                                                               | 0.0                                                                               | 16.8                                                                              | 0.0                                                                               | 0.0                                                                               | 18.5                                                                                | 0.0                                                                                 | 6.4                                                                                 | 18.1                                                                                | 0.0                                                                                 | 5.2                                                                                 |
| Incr Delay (d2), s/veh      | 0.2                                                                               | 0.0                                                                               | 0.0                                                                               | 0.6                                                                               | 0.0                                                                               | 0.0                                                                               | 16.8                                                                                | 0.0                                                                                 | 3.1                                                                                 | 10.0                                                                                | 0.0                                                                                 | 0.8                                                                                 |
| Initial Q Delay(d3),s/veh   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln    | 0.3                                                                               | 0.0                                                                               | 0.0                                                                               | 0.8                                                                               | 0.0                                                                               | 0.0                                                                               | 0.2                                                                                 | 0.0                                                                                 | 7.9                                                                                 | 0.4                                                                                 | 0.0                                                                                 | 5.0                                                                                 |
| LnGrp Delay(d),s/veh        | 16.4                                                                              | 0.0                                                                               | 0.0                                                                               | 17.3                                                                              | 0.0                                                                               | 0.0                                                                               | 35.3                                                                                | 0.0                                                                                 | 9.5                                                                                 | 28.2                                                                                | 0.0                                                                                 | 6.0                                                                                 |
| LnGrp LOS                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | D                                                                                   |                                                                                     | A                                                                                   | C                                                                                   |                                                                                     | A                                                                                   |
| Approach Vol, veh/h         | 27                                                                                |                                                                                   |                                                                                   | 77                                                                                |                                                                                   |                                                                                   | 876                                                                                 |                                                                                     |                                                                                     | 748                                                                                 |                                                                                     |                                                                                     |
| Approach Delay, s/veh       | 16.4                                                                              |                                                                                   |                                                                                   | 17.3                                                                              |                                                                                   |                                                                                   | 9.9                                                                                 |                                                                                     |                                                                                     | 6.8                                                                                 |                                                                                     |                                                                                     |
| Approach LOS                | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | A                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |                                                                                     |
| Timer                       | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7                                                                                   | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Assigned Phs                | 1                                                                                 | 2                                                                                 |                                                                                   | 4                                                                                 | 5                                                                                 | 6                                                                                 |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s    | 5.0                                                                               | 25.7                                                                              |                                                                                   | 7.0                                                                               | 4.5                                                                               | 26.2                                                                              |                                                                                     | 7.0                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Change Period (Y+Rc), s     | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               | 4.0                                                                               |                                                                                     | 4.0                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Green Setting (Gmax),s  | 4.0                                                                               | 28.0                                                                              |                                                                                   | 16.0                                                                              | 4.0                                                                               | 28.0                                                                              |                                                                                     | 16.0                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1),s | 16.2                                                                              |                                                                                   |                                                                                   | 2.6                                                                               | 2.3                                                                               | 11.8                                                                              |                                                                                     | 3.8                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s     | 0.0                                                                               | 5.5                                                                               |                                                                                   | 0.2                                                                               | 0.0                                                                               | 6.5                                                                               |                                                                                     | 0.2                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2010 Ctrl Delay         |                                                                                   |                                                                                   |                                                                                   | 9.0                                                                               |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2010 LOS                |                                                                                   |                                                                                   |                                                                                   | A                                                                                 |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

2018 PM Peak Hour  
with Project with Signal

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HCM 2010 TWSC  
2: SR29 & Greystone

22/06/2016

| Intersection             |        |      |        |      |        |      |  |
|--------------------------|--------|------|--------|------|--------|------|--|
| Int Delay, s/veh         | 0.5    |      |        |      |        |      |  |
| Movement                 | EBL    | EBR  | NBL    | NBT  | SBT    | SBR  |  |
| Vol, veh/h               | 5      | 8    | 42     | 784  | 957    | 24   |  |
| Conflicting Peds, #/hr   | 0      | 0    | 0      | 0    | 0      | 0    |  |
| Sign Control             | Stop   | Stop | Free   | Free | Free   | Free |  |
| RT Channelized           | -      | None | -      | None | -      | None |  |
| Storage Length           | 0      | -    | 170    | -    | -      | -    |  |
| Veh in Median Storage, # | 0      | -    | -      | 0    | 0      | -    |  |
| Grade, %                 | 0      | -    | -      | 0    | 0      | -    |  |
| Peak Hour Factor         | 94     | 94   | 94     | 94   | 94     | 94   |  |
| Heavy Vehicles, %        | 0      | 0    | 0      | 8    | 6      | 0    |  |
| Mvmt Flow                | 5      | 9    | 45     | 834  | 1018   | 26   |  |
| Major/Minor              | Minor2 |      | Major1 |      | Major2 |      |  |
| Conflicting Flow All     | 1954   | 1031 | 1044   | 0    | -      | 0    |  |
| Stage 1                  | 1031   | -    | -      | -    | -      | -    |  |
| Stage 2                  | 923    | -    | -      | -    | -      | -    |  |
| Critical Hdwy            | 6.4    | 6.2  | 4.1    | -    | -      | -    |  |
| Critical Hdwy Stg 1      | 5.4    | -    | -      | -    | -      | -    |  |
| Critical Hdwy Stg 2      | 5.4    | -    | -      | -    | -      | -    |  |
| Follow-up Hdwy           | 3.5    | 3.3  | 2.2    | -    | -      | -    |  |
| Pot Cap-1 Maneuver       | 71     | 286  | 674    | -    | -      | -    |  |
| Stage 1                  | 347    | -    | -      | -    | -      | -    |  |
| Stage 2                  | 390    | -    | -      | -    | -      | -    |  |
| Platoon blocked, %       |        |      |        | -    | -      | -    |  |
| Mov Cap-1 Maneuver       | 66     | 286  | 674    | -    | -      | -    |  |
| Mov Cap-2 Maneuver       | 66     | -    | -      | -    | -      | -    |  |
| Stage 1                  | 347    | -    | -      | -    | -      | -    |  |
| Stage 2                  | 364    | -    | -      | -    | -      | -    |  |
| Approach                 | EB     |      | NB     |      | SB     |      |  |
| HCM Control Delay, s     | 37.4   |      | 0.5    |      | 0      |      |  |
| HCM LOS                  | E      |      |        |      |        |      |  |
| Minor Lane/Major Mvmt    | NBL    | NB   | EBLn1  | SBT  | SBR    |      |  |
| Capacity (veh/h)         | 674    | -    | 125    | -    | -      |      |  |
| HCM Lane V/C Ratio       | 0.066  | -    | 0.111  | -    | -      |      |  |
| HCM Control Delay (s)    | 10.7   | -    | 37.4   | -    | -      |      |  |
| HCM Lane LOS             | B      | -    | E      | -    | -      |      |  |
| HCM 95th %tile Q(veh)    | 0.2    | -    | 0.4    | -    | -      |      |  |

2035 AM Peak Hour  
without Project

Synchro 8 Report  
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HCM 2010 TWSC  
4: SR29 & Las Alcobas/Pratt Ave

22/06/2016

| Intersection                                                                                                         |        |      |      |          |          |       |        |      |      |        |      |      |
|----------------------------------------------------------------------------------------------------------------------|--------|------|------|----------|----------|-------|--------|------|------|--------|------|------|
| Int Delay, s/veh                                                                                                     | 23     |      |      |          |          |       |        |      |      |        |      |      |
|                                                                                                                      |        |      |      |          |          |       |        |      |      |        |      |      |
| Movement                                                                                                             | EBL    | EBT  | EBR  | WBL      | WBT      | WBR   | NBL    | NBT  | NBR  | SBL    | SBT  | SBR  |
| Vol, veh/h                                                                                                           | 8      | 3    | 8    | 60       | 4        | 20    | 17     | 785  | 70   | 20     | 980  | 7    |
| Conflicting Peds, #/hr                                                                                               | 0      | 0    | 0    | 5        | 0        | 5     | 0      | 0    | 0    | 0      | 0    | 0    |
| Sign Control                                                                                                         | Stop   | Stop | Stop | Stop     | Stop     | Stop  | Free   | Free | Free | Free   | Free | Free |
| RT Channelized                                                                                                       | -      | -    | None | -        | -        | None  | -      | -    | None | -      | -    | None |
| Storage Length                                                                                                       | -      | -    | -    | -        | -        | -     | 100    | -    | -    | 70     | -    | -    |
| Veh in Median Storage, #                                                                                             | -      | 0    | -    | -        | 0        | -     | -      | 0    | -    | -      | 0    | -    |
| Grade, %                                                                                                             | -      | 0    | -    | -        | 0        | -     | -      | 0    | -    | -      | 0    | -    |
| Peak Hour Factor                                                                                                     | 94     | 94   | 94   | 94       | 94       | 94    | 94     | 94   | 94   | 94     | 94   | 94   |
| Heavy Vehicles, %                                                                                                    | 0      | 0    | 0    | 0        | 0        | 0     | 0      | 8    | 0    | 0      | 6    | 0    |
| Mvmt Flow                                                                                                            | 9      | 3    | 9    | 64       | 4        | 21    | 18     | 835  | 74   | 21     | 1043 | 7    |
|                                                                                                                      |        |      |      |          |          |       |        |      |      |        |      |      |
| Major/Minor                                                                                                          | Minor2 |      |      | Minor1   |          |       | Major1 |      |      | Major2 |      |      |
| Conflicting Flow All                                                                                                 | 2015   | 2040 | 1046 | 2009     | 2007     | 877   | 1050   | 0    | 0    | 915    | 0    | 0    |
| Stage 1                                                                                                              | 1089   | 1089 | -    | 914      | 914      | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                                                                                                              | 926    | 951  | -    | 1095     | 1093     | -     | -      | -    | -    | -      | -    | -    |
| Critical Hdwy                                                                                                        | 7.1    | 6.5  | 6.2  | 7.1      | 6.5      | 6.2   | 4.1    | -    | -    | 4.1    | -    | -    |
| Critical Hdwy Stg 1                                                                                                  | 6.1    | 5.5  | -    | 6.1      | 5.5      | -     | -      | -    | -    | -      | -    | -    |
| Critical Hdwy Stg 2                                                                                                  | 6.1    | 5.5  | -    | 6.1      | 5.5      | -     | -      | -    | -    | -      | -    | -    |
| Follow-up Hdwy                                                                                                       | 3.5    | 4    | 3.3  | 3.5      | 4        | 3.3   | 2.2    | -    | -    | 2.2    | -    | -    |
| Pot Cap-1 Maneuver                                                                                                   | 44     | 57   | 280  | ~ 45     | 60       | 351   | 671    | -    | -    | 754    | -    | -    |
| Stage 1                                                                                                              | 263    | 294  | -    | 330      | 355      | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                                                                                                              | 325    | 341  | -    | 261      | 293      | -     | -      | -    | -    | -      | -    | -    |
| Platoon blocked, %                                                                                                   |        |      |      |          |          |       |        | -    | -    |        | -    | -    |
| Mov Cap-1 Maneuver                                                                                                   | 37     | 54   | 280  | ~ 40     | 57       | 350   | 671    | -    | -    | 754    | -    | -    |
| Mov Cap-2 Maneuver                                                                                                   | 37     | 54   | -    | ~ 40     | 57       | -     | -      | -    | -    | -      | -    | -    |
| Stage 1                                                                                                              | 256    | 286  | -    | 320      | 344      | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                                                                                                              | 293    | 330  | -    | 243      | 285      | -     | -      | -    | -    | -      | -    | -    |
|                                                                                                                      |        |      |      |          |          |       |        |      |      |        |      |      |
| Approach                                                                                                             | EB     |      |      | WB       |          |       | NB     |      |      | SB     |      |      |
| HCM Control Delay, s                                                                                                 | 87.1   |      |      | \$ 518.2 |          |       | 0.2    |      |      | 0.2    |      |      |
| HCM LOS                                                                                                              | F      |      |      | F        |          |       |        |      |      |        |      |      |
|                                                                                                                      |        |      |      |          |          |       |        |      |      |        |      |      |
| Minor Lane/Major Mvmt                                                                                                | NBL    | NBT  | NBR  | EBLn1    | WBLn1    | SBL   | SBT    | SBR  |      |        |      |      |
| Capacity (veh/h)                                                                                                     | 671    | -    | -    | 63       | 52       | 754   | -      | -    |      |        |      |      |
| HCM Lane V/C Ratio                                                                                                   | 0.027  | -    | -    | 0.321    | 1.718    | 0.028 | -      | -    |      |        |      |      |
| HCM Control Delay (s)                                                                                                | 10.5   | -    | -    | 87.1     | \$ 518.2 | 9.9   | -      | -    |      |        |      |      |
| HCM Lane LOS                                                                                                         | B      | -    | -    | F        | F        | A     | -      | -    |      |        |      |      |
| HCM 95th %tile Q(veh)                                                                                                | 0.1    | -    | -    | 1.2      | 8.6      | 0.1   | -      | -    |      |        |      |      |
| Notes                                                                                                                |        |      |      |          |          |       |        |      |      |        |      |      |
| ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    *: All major volume in platoon |        |      |      |          |          |       |        |      |      |        |      |      |

2035 AM Peak Hour  
without Project No Signal

Synchro 8 Report  
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HCM 2010 Signalized Intersection Summary  
4: SR29 & Las Alcobas/Pratt Ave

22/06/2016

|                             |  |  |  |  |  |  |   |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                    | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations         |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |  |  |                                                                                     |  |  |                                                                                     |
| Volume (veh/h)              | 8                                                                                 | 3                                                                                 | 8                                                                                 | 60                                                                                | 4                                                                                 | 20                                                                                | 17                                                                                  | 785                                                                                 | 70                                                                                  | 20                                                                                  | 980                                                                                 | 7                                                                                   |
| Number                      | 7                                                                                 | 4                                                                                 | 14                                                                                | 3                                                                                 | 8                                                                                 | 18                                                                                | 5                                                                                   | 2                                                                                   | 12                                                                                  | 1                                                                                   | 6                                                                                   | 16                                                                                  |
| Initial Q (Qb), veh         | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ped-Bike Adj(A_pbT)         | 0.98                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 0.93                                                                              | 1.00                                                                                |                                                                                     | 0.98                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Parking Bus, Adj            | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Adj Sat Flow, veh/h/ln      | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                                | 1770                                                                                | 1900                                                                                | 1900                                                                                | 1793                                                                                | 1900                                                                                |
| Adj Flow Rate, veh/h        | 9                                                                                 | 3                                                                                 | 9                                                                                 | 64                                                                                | 4                                                                                 | 21                                                                                | 18                                                                                  | 835                                                                                 | 74                                                                                  | 21                                                                                  | 1043                                                                                | 7                                                                                   |
| Adj No. of Lanes            | 0                                                                                 | 1                                                                                 | 0                                                                                 | 0                                                                                 | 1                                                                                 | 0                                                                                 | 1                                                                                   | 1                                                                                   | 0                                                                                   | 1                                                                                   | 1                                                                                   | 0                                                                                   |
| Peak Hour Factor            | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                |
| Percent Heavy Veh, %        | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 8                                                                                   | 8                                                                                   | 0                                                                                   | 6                                                                                   | 6                                                                                   |
| Cap, veh/h                  | 142                                                                               | 44                                                                                | 64                                                                                | 216                                                                               | 6                                                                                 | 31                                                                                | 32                                                                                  | 1051                                                                                | 93                                                                                  | 37                                                                                  | 1174                                                                                | 8                                                                                   |
| Arrive On Green             | 0.09                                                                              | 0.09                                                                              | 0.09                                                                              | 0.09                                                                              | 0.09                                                                              | 0.09                                                                              | 0.02                                                                                | 0.66                                                                                | 0.66                                                                                | 0.02                                                                                | 0.66                                                                                | 0.66                                                                                |
| Sat Flow, veh/h             | 476                                                                               | 501                                                                               | 733                                                                               | 1083                                                                              | 68                                                                                | 355                                                                               | 1810                                                                                | 1599                                                                                | 142                                                                                 | 1810                                                                                | 1779                                                                                | 12                                                                                  |
| Grp Volume(v), veh/h        | 21                                                                                | 0                                                                                 | 0                                                                                 | 89                                                                                | 0                                                                                 | 0                                                                                 | 18                                                                                  | 0                                                                                   | 909                                                                                 | 21                                                                                  | 0                                                                                   | 1050                                                                                |
| Grp Sat Flow(s),veh/h/ln    | 1709                                                                              | 0                                                                                 | 0                                                                                 | 1506                                                                              | 0                                                                                 | 0                                                                                 | 1810                                                                                | 0                                                                                   | 1741                                                                                | 1810                                                                                | 0                                                                                   | 1791                                                                                |
| Q Serve(g_s), s             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 2.3                                                                               | 0.0                                                                               | 0.0                                                                               | 0.5                                                                                 | 0.0                                                                                 | 19.1                                                                                | 0.6                                                                                 | 0.0                                                                                 | 24.6                                                                                |
| Cycle Q Clear(g_c), s       | 0.6                                                                               | 0.0                                                                               | 0.0                                                                               | 2.9                                                                               | 0.0                                                                               | 0.0                                                                               | 0.5                                                                                 | 0.0                                                                                 | 19.1                                                                                | 0.6                                                                                 | 0.0                                                                                 | 24.6                                                                                |
| Prop In Lane                | 0.43                                                                              |                                                                                   | 0.43                                                                              | 0.72                                                                              |                                                                                   | 0.24                                                                              | 1.00                                                                                |                                                                                     | 0.08                                                                                | 1.00                                                                                |                                                                                     | 0.01                                                                                |
| Lane Grp Cap(c), veh/h      | 250                                                                               | 0                                                                                 | 0                                                                                 | 253                                                                               | 0                                                                                 | 0                                                                                 | 32                                                                                  | 0                                                                                   | 1144                                                                                | 37                                                                                  | 0                                                                                   | 1182                                                                                |
| V/C Ratio(X)                | 0.08                                                                              | 0.00                                                                              | 0.00                                                                              | 0.35                                                                              | 0.00                                                                              | 0.00                                                                              | 0.56                                                                                | 0.00                                                                                | 0.79                                                                                | 0.57                                                                                | 0.00                                                                                | 0.89                                                                                |
| Avail Cap(c_a), veh/h       | 599                                                                               | 0                                                                                 | 0                                                                                 | 584                                                                               | 0                                                                                 | 0                                                                                 | 142                                                                                 | 0                                                                                   | 1299                                                                                | 142                                                                                 | 0                                                                                   | 1336                                                                                |
| HCM Platoon Ratio           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Upstream Filter(I)          | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                |
| Uniform Delay (d), s/veh    | 21.5                                                                              | 0.0                                                                               | 0.0                                                                               | 22.5                                                                              | 0.0                                                                               | 0.0                                                                               | 24.8                                                                                | 0.0                                                                                 | 6.3                                                                                 | 24.7                                                                                | 0.0                                                                                 | 7.1                                                                                 |
| Incr Delay (d2), s/veh      | 0.1                                                                               | 0.0                                                                               | 0.0                                                                               | 0.8                                                                               | 0.0                                                                               | 0.0                                                                               | 14.6                                                                                | 0.0                                                                                 | 3.1                                                                                 | 13.5                                                                                | 0.0                                                                                 | 7.1                                                                                 |
| Initial Q Delay(d3),s/veh   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln    | 0.3                                                                               | 0.0                                                                               | 0.0                                                                               | 1.3                                                                               | 0.0                                                                               | 0.0                                                                               | 0.4                                                                                 | 0.0                                                                                 | 9.8                                                                                 | 0.4                                                                                 | 0.0                                                                                 | 14.0                                                                                |
| LnGrp Delay(d),s/veh        | 21.6                                                                              | 0.0                                                                               | 0.0                                                                               | 23.3                                                                              | 0.0                                                                               | 0.0                                                                               | 39.4                                                                                | 0.0                                                                                 | 9.4                                                                                 | 38.2                                                                                | 0.0                                                                                 | 14.2                                                                                |
| LnGrp LOS                   | C                                                                                 |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | D                                                                                   |                                                                                     | A                                                                                   | D                                                                                   |                                                                                     | B                                                                                   |
| Approach Vol, veh/h         | 21                                                                                |                                                                                   |                                                                                   | 89                                                                                |                                                                                   |                                                                                   | 927                                                                                 |                                                                                     |                                                                                     | 1071                                                                                |                                                                                     |                                                                                     |
| Approach Delay, s/veh       | 21.6                                                                              |                                                                                   |                                                                                   | 23.3                                                                              |                                                                                   |                                                                                   | 10.0                                                                                |                                                                                     |                                                                                     | 14.7                                                                                |                                                                                     |                                                                                     |
| Approach LOS                | C                                                                                 |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | A                                                                                   |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |                                                                                     |
| Timer                       | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7                                                                                   | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Assigned Phs                | 1                                                                                 | 2                                                                                 |                                                                                   | 4                                                                                 | 5                                                                                 | 6                                                                                 |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s    | 5.0                                                                               | 37.5                                                                              |                                                                                   | 8.4                                                                               | 4.9                                                                               | 37.6                                                                              |                                                                                     | 8.4                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Change Period (Y+Rc), s     | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               | 4.0                                                                               |                                                                                     | 4.0                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Green Setting (Gmax),s  | 40                                                                                | 38.0                                                                              |                                                                                   | 16.0                                                                              | 4.0                                                                               | 38.0                                                                              |                                                                                     | 16.0                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1),s | 4.0                                                                               | 21.1                                                                              |                                                                                   | 2.6                                                                               | 2.5                                                                               | 26.6                                                                              |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s     | 0.0                                                                               | 9.1                                                                               |                                                                                   | 0.2                                                                               | 0.0                                                                               | 7.0                                                                               |                                                                                     | 0.2                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

Intersection Summary

HCM 2010 Ctrl Delay 13.0  
HCM 2010 LOS B

Notes

User approved pedestrian interval to be less than phase max green.

2035 AM Peak Hour  
without Project with Signal

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HCM 2010 TWSC  
2: SR29 & Greystone

22/06/2016

| Intersection             |        |      |        |      |        |      |  |
|--------------------------|--------|------|--------|------|--------|------|--|
| Int Delay, s/veh         | 2.9    |      |        |      |        |      |  |
| Movement                 | EBL    | EBR  | NBL    | NBT  | SBT    | SBR  |  |
| Vol, veh/h               | 29     | 43   | 19     | 1115 | 895    | 10   |  |
| Conflicting Peds, #/hr   | 0      | 0    | 0      | 0    | 0      | 0    |  |
| Sign Control             | Stop   | Stop | Free   | Free | Free   | Free |  |
| RT Channelized           | -      | None | -      | None | -      | None |  |
| Storage Length           | 0      | -    | 170    | -    | -      | -    |  |
| Veh in Median Storage, # | 0      | -    | -      | 0    | 0      | -    |  |
| Grade, %                 | 0      | -    | -      | 0    | 0      | -    |  |
| Peak Hour Factor         | 98     | 98   | 98     | 98   | 98     | 98   |  |
| Heavy Vehicles, %        | 0      | 0    | 0      | 8    | 6      | 0    |  |
| Mvmt Flow                | 30     | 44   | 19     | 1138 | 913    | 10   |  |
| Major/Minor              | Minor2 |      | Major1 |      | Major2 |      |  |
| Conflicting Flow All     | 2095   | 918  | 923    | 0    | -      | 0    |  |
| Stage 1                  | 918    | -    | -      | -    | -      | -    |  |
| Stage 2                  | 1177   | -    | -      | -    | -      | -    |  |
| Critical Hdwy            | 6.4    | 6.2  | 4.1    | -    | -      | -    |  |
| Critical Hdwy Stg 1      | 5.4    | -    | -      | -    | -      | -    |  |
| Critical Hdwy Stg 2      | 5.4    | -    | -      | -    | -      | -    |  |
| Follow-up Hdwy           | 3.5    | 3.3  | 2.2    | -    | -      | -    |  |
| Pot Cap-1 Maneuver       | 58     | 332  | 748    | -    | -      | -    |  |
| Stage 1                  | 392    | -    | -      | -    | -      | -    |  |
| Stage 2                  | 295    | -    | -      | -    | -      | -    |  |
| Platoon blocked, %       |        |      |        | -    | -      | -    |  |
| Mov Cap-1 Maneuver       | 57     | 332  | 748    | -    | -      | -    |  |
| Mov Cap-2 Maneuver       | 57     | -    | -      | -    | -      | -    |  |
| Stage 1                  | 392    | -    | -      | -    | -      | -    |  |
| Stage 2                  | 288    | -    | -      | -    | -      | -    |  |
| Approach                 | EB     |      | NB     |      | SB     |      |  |
| HCM Control Delay, s     | 82.7   |      | 0.2    |      | 0      |      |  |
| HCM LOS                  | F      |      |        |      |        |      |  |
| Minor Lane/Major Mvmt    | NBL    | NB   | EBLn1  | SBT  | SBR    |      |  |
| Capacity (veh/h)         | 748    | -    | 113    | -    | -      |      |  |
| HCM Lane V/C Ratio       | 0.026  | -    | 0.65   | -    | -      |      |  |
| HCM Control Delay (s)    | 9.9    | -    | 82.7   | -    | -      |      |  |
| HCM Lane LOS             | A      | -    | F      | -    | -      |      |  |
| HCM 95th %tile Q(veh)    | 0.1    | -    | 3.3    | -    | -      |      |  |

2035 PM Peak Hour  
without Project

Synchro 8 Report  
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HCM 2010 TWSC  
4: SR29 & Las Alcobas/Pratt Ave

22/06/2016

| Intersection                                                                                                         |        |      |      |        |        |       |        |      |      |        |      |      |
|----------------------------------------------------------------------------------------------------------------------|--------|------|------|--------|--------|-------|--------|------|------|--------|------|------|
| Int Delay, s/veh                                                                                                     | 34     |      |      |        |        |       |        |      |      |        |      |      |
|                                                                                                                      |        |      |      |        |        |       |        |      |      |        |      |      |
| Movement                                                                                                             | EBL    | EBT  | EBR  | WBL    | WBT    | WBR   | NBL    | NBT  | NBR  | SBL    | SBT  | SBR  |
| Vol, veh/h                                                                                                           | 7      | 4    | 16   | 60     | 4      | 20    | 13     | 1090 | 55   | 25     | 925  | 9    |
| Conflicting Peds, #/hr                                                                                               | 0      | 0    | 0    | 5      | 0      | 5     | 0      | 0    | 0    | 0      | 0    | 0    |
| Sign Control                                                                                                         | Stop   | Stop | Stop | Stop   | Stop   | Stop  | Free   | Free | Free | Free   | Free | Free |
| RT Channelized                                                                                                       | -      | -    | None | -      | -      | None  | -      | -    | None | -      | -    | None |
| Storage Length                                                                                                       | -      | -    | -    | -      | -      | -     | 100    | -    | -    | 70     | -    | -    |
| Veh in Median Storage, #                                                                                             | -      | 0    | -    | -      | 0      | -     | -      | 0    | -    | -      | 0    | -    |
| Grade, %                                                                                                             | -      | 0    | -    | -      | 0      | -     | -      | 0    | -    | -      | 0    | -    |
| Peak Hour Factor                                                                                                     | 98     | 98   | 98   | 98     | 98     | 98    | 98     | 98   | 98   | 98     | 98   | 98   |
| Heavy Vehicles, %                                                                                                    | 0      | 0    | 0    | 0      | 0      | 0     | 0      | 8    | 0    | 0      | 6    | 0    |
| Mvmt Flow                                                                                                            | 7      | 4    | 16   | 61     | 4      | 20    | 13     | 1112 | 56   | 26     | 944  | 9    |
|                                                                                                                      |        |      |      |        |        |       |        |      |      |        |      |      |
| Major/Minor                                                                                                          | Minor2 |      |      | Minor1 |        |       | Major1 |      |      | Major2 |      |      |
| Conflicting Flow All                                                                                                 | 2183   | 2199 | 948  | 2182   | 2176   | 1145  | 953    | 0    | 0    | 1173   | 0    | 0    |
| Stage 1                                                                                                              | 999    | 999  | -    | 1172   | 1172   | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                                                                                                              | 1184   | 1200 | -    | 1010   | 1004   | -     | -      | -    | -    | -      | -    | -    |
| Critical Hdwy                                                                                                        | 7.1    | 6.5  | 6.2  | 7.1    | 6.5    | 6.2   | 4.1    | -    | -    | 4.1    | -    | -    |
| Critical Hdwy Stg 1                                                                                                  | 6.1    | 5.5  | -    | 6.1    | 5.5    | -     | -      | -    | -    | -      | -    | -    |
| Critical Hdwy Stg 2                                                                                                  | 6.1    | 5.5  | -    | 6.1    | 5.5    | -     | -      | -    | -    | -      | -    | -    |
| Follow-up Hdwy                                                                                                       | 3.5    | 4    | 3.3  | 3.5    | 4      | 3.3   | 2.2    | -    | -    | 2.2    | -    | -    |
| Pot Cap-1 Maneuver                                                                                                   | 33     | 45   | 319  | ~ 34   | 47     | 245   | 729    | -    | -    | 603    | -    | -    |
| Stage 1                                                                                                              | 296    | 324  | -    | 237    | 269    | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                                                                                                              | 233    | 261  | -    | 292    | 322    | -     | -      | -    | -    | -      | -    | -    |
| Platoon blocked, %                                                                                                   |        |      |      |        |        |       |        | -    | -    |        | -    | -    |
| Mov Cap-1 Maneuver                                                                                                   | 27     | 42   | 319  | ~ 28   | 44     | 244   | 729    | -    | -    | 603    | -    | -    |
| Mov Cap-2 Maneuver                                                                                                   | 27     | 42   | -    | ~ 28   | 44     | -     | -      | -    | -    | -      | -    | -    |
| Stage 1                                                                                                              | 291    | 310  | -    | 232    | 263    | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                                                                                                              | 206    | 255  | -    | 262    | 308    | -     | -      | -    | -    | -      | -    | -    |
|                                                                                                                      |        |      |      |        |        |       |        |      |      |        |      |      |
| Approach                                                                                                             | EB     |      |      | WB     |        |       | NB     |      |      | SB     |      |      |
| HCM Control Delay, s                                                                                                 | 92.1   |      |      | \$ 867 |        |       | 0.1    |      |      | 0.3    |      |      |
| HCM LOS                                                                                                              | F      |      |      | F      |        |       |        |      |      |        |      |      |
|                                                                                                                      |        |      |      |        |        |       |        |      |      |        |      |      |
| Minor Lane/Major Mvmt                                                                                                | NBL    | NBT  | NBR  | EBLn1  | WBLn1  | SBL   | SBT    | SBR  |      |        |      |      |
| Capacity (veh/h)                                                                                                     | 729    | -    | -    | 67     | 36     | 603   | -      | -    |      |        |      |      |
| HCM Lane V/C Ratio                                                                                                   | 0.018  | -    | -    | 0.411  | 2.381  | 0.042 | -      | -    |      |        |      |      |
| HCM Control Delay (s)                                                                                                | 10     | -    | -    | 92.1   | \$ 867 | 11.2  | -      | -    |      |        |      |      |
| HCM Lane LOS                                                                                                         | B      | -    | -    | F      | F      | B     | -      | -    |      |        |      |      |
| HCM 95th %tile Q(veh)                                                                                                | 0.1    | -    | -    | 1.6    | 9.6    | 0.1   | -      | -    |      |        |      |      |
| Notes                                                                                                                |        |      |      |        |        |       |        |      |      |        |      |      |
| ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    *: All major volume in platoon |        |      |      |        |        |       |        |      |      |        |      |      |

2035 PM Peak Hour  
without Project No signal

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HCM 2010 Signalized Intersection Summary  
4: SR29 & Las Alcobas/Pratt Ave

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|                             |  |  |  |  |  |  |   |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                    | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations         |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |  |  |                                                                                     |  |  |                                                                                     |
| Volume (veh/h)              | 7                                                                                 | 4                                                                                 | 16                                                                                | 60                                                                                | 4                                                                                 | 20                                                                                | 13                                                                                  | 1090                                                                                | 55                                                                                  | 25                                                                                  | 925                                                                                 | 9                                                                                   |
| Number                      | 7                                                                                 | 4                                                                                 | 14                                                                                | 3                                                                                 | 8                                                                                 | 18                                                                                | 5                                                                                   | 2                                                                                   | 12                                                                                  | 1                                                                                   | 6                                                                                   | 16                                                                                  |
| Initial Q (Qb), veh         | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ped-Bike Adj(A_pbT)         | 0.98                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 0.93                                                                              | 1.00                                                                                |                                                                                     | 0.98                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Parking Bus, Adj            | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Adj Sat Flow, veh/h/ln      | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                                | 1766                                                                                | 1900                                                                                | 1900                                                                                | 1793                                                                                | 1900                                                                                |
| Adj Flow Rate, veh/h        | 7                                                                                 | 4                                                                                 | 16                                                                                | 61                                                                                | 4                                                                                 | 20                                                                                | 13                                                                                  | 1112                                                                                | 56                                                                                  | 26                                                                                  | 944                                                                                 | 9                                                                                   |
| Adj No. of Lanes            | 0                                                                                 | 1                                                                                 | 0                                                                                 | 0                                                                                 | 1                                                                                 | 0                                                                                 | 1                                                                                   | 1                                                                                   | 0                                                                                   | 1                                                                                   | 1                                                                                   | 0                                                                                   |
| Peak Hour Factor            | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                |
| Percent Heavy Veh, %        | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 8                                                                                   | 8                                                                                   | 0                                                                                   | 6                                                                                   | 6                                                                                   |
| Cap, veh/h                  | 104                                                                               | 36                                                                                | 85                                                                                | 201                                                                               | 7                                                                                 | 30                                                                                | 24                                                                                  | 1128                                                                                | 57                                                                                  | 43                                                                                  | 1221                                                                                | 12                                                                                  |
| Arrive On Green             | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.01                                                                                | 0.68                                                                                | 0.68                                                                                | 0.02                                                                                | 0.69                                                                                | 0.69                                                                                |
| Sat Flow, veh/h             | 270                                                                               | 424                                                                               | 1009                                                                              | 1073                                                                              | 87                                                                                | 357                                                                               | 1810                                                                                | 1665                                                                                | 84                                                                                  | 1810                                                                                | 1774                                                                                | 17                                                                                  |
| Grp Volume(v), veh/h        | 27                                                                                | 0                                                                                 | 0                                                                                 | 85                                                                                | 0                                                                                 | 0                                                                                 | 13                                                                                  | 0                                                                                   | 1168                                                                                | 26                                                                                  | 0                                                                                   | 953                                                                                 |
| Grp Sat Flow(s),veh/h/ln    | 1703                                                                              | 0                                                                                 | 0                                                                                 | 1517                                                                              | 0                                                                                 | 0                                                                                 | 1810                                                                                | 0                                                                                   | 1748                                                                                | 1810                                                                                | 0                                                                                   | 1790                                                                                |
| Q Serve(g_s), s             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 2.1                                                                               | 0.0                                                                               | 0.0                                                                               | 0.4                                                                                 | 0.0                                                                                 | 36.3                                                                                | 0.8                                                                                 | 0.0                                                                                 | 19.9                                                                                |
| Cycle Q Clear(g_c), s       | 0.8                                                                               | 0.0                                                                               | 0.0                                                                               | 3.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.4                                                                                 | 0.0                                                                                 | 36.3                                                                                | 0.8                                                                                 | 0.0                                                                                 | 19.9                                                                                |
| Prop In Lane                | 0.26                                                                              |                                                                                   | 0.59                                                                              | 0.72                                                                              |                                                                                   | 0.24                                                                              | 1.00                                                                                |                                                                                     | 0.05                                                                                | 1.00                                                                                |                                                                                     | 0.01                                                                                |
| Lane Grp Cap(c), veh/h      | 225                                                                               | 0                                                                                 | 0                                                                                 | 238                                                                               | 0                                                                                 | 0                                                                                 | 24                                                                                  | 0                                                                                   | 1185                                                                                | 43                                                                                  | 0                                                                                   | 1233                                                                                |
| V/C Ratio(X)                | 0.12                                                                              | 0.00                                                                              | 0.00                                                                              | 0.36                                                                              | 0.00                                                                              | 0.00                                                                              | 0.55                                                                                | 0.00                                                                                | 0.99                                                                                | 0.60                                                                                | 0.00                                                                                | 0.77                                                                                |
| Avail Cap(c_a), veh/h       | 542                                                                               | 0                                                                                 | 0                                                                                 | 530                                                                               | 0                                                                                 | 0                                                                                 | 129                                                                                 | 0                                                                                   | 1185                                                                                | 129                                                                                 | 0                                                                                   | 1233                                                                                |
| HCM Platoon Ratio           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Upstream Filter(I)          | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                |
| Uniform Delay (d), s/veh    | 23.9                                                                              | 0.0                                                                               | 0.0                                                                               | 24.8                                                                              | 0.0                                                                               | 0.0                                                                               | 27.5                                                                                | 0.0                                                                                 | 8.8                                                                                 | 27.1                                                                                | 0.0                                                                                 | 5.8                                                                                 |
| Incr Delay (d2), s/veh      | 0.2                                                                               | 0.0                                                                               | 0.0                                                                               | 0.9                                                                               | 0.0                                                                               | 0.0                                                                               | 18.4                                                                                | 0.0                                                                                 | 22.6                                                                                | 12.9                                                                                | 0.0                                                                                 | 3.1                                                                                 |
| Initial Q Delay(d3),s/veh   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln    | 0.4                                                                               | 0.0                                                                               | 0.0                                                                               | 1.3                                                                               | 0.0                                                                               | 0.0                                                                               | 0.3                                                                                 | 0.0                                                                                 | 24.3                                                                                | 0.6                                                                                 | 0.0                                                                                 | 10.6                                                                                |
| LnGrp Delay(d),s/veh        | 24.1                                                                              | 0.0                                                                               | 0.0                                                                               | 25.7                                                                              | 0.0                                                                               | 0.0                                                                               | 45.9                                                                                | 0.0                                                                                 | 31.4                                                                                | 40.0                                                                                | 0.0                                                                                 | 8.9                                                                                 |
| LnGrp LOS                   | C                                                                                 |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | D                                                                                   |                                                                                     | C                                                                                   | D                                                                                   |                                                                                     | A                                                                                   |
| Approach Vol, veh/h         | 27                                                                                |                                                                                   |                                                                                   | 85                                                                                |                                                                                   |                                                                                   | 1181                                                                                |                                                                                     |                                                                                     | 979                                                                                 |                                                                                     |                                                                                     |
| Approach Delay, s/veh       | 24.1                                                                              |                                                                                   |                                                                                   | 25.7                                                                              |                                                                                   |                                                                                   | 31.5                                                                                |                                                                                     |                                                                                     | 9.8                                                                                 |                                                                                     |                                                                                     |
| Approach LOS                | C                                                                                 |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | C                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |                                                                                     |
| Timer                       | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7                                                                                   | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Assigned Phs                | 1                                                                                 | 2                                                                                 |                                                                                   | 4                                                                                 | 5                                                                                 | 6                                                                                 |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s    | 5.3                                                                               | 42.0                                                                              |                                                                                   | 8.7                                                                               | 4.7                                                                               | 42.6                                                                              |                                                                                     | 8.7                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Change Period (Y+Rc), s     | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               | 4.0                                                                               |                                                                                     | 4.0                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Green Setting (Gmax),s  | 40.0                                                                              | 38.0                                                                              |                                                                                   | 16.0                                                                              | 4.0                                                                               | 38.0                                                                              |                                                                                     | 16.0                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1),s | 2.8                                                                               | 38.3                                                                              |                                                                                   | 2.8                                                                               | 2.4                                                                               | 21.9                                                                              |                                                                                     | 5.0                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s     | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.2                                                                               | 0.0                                                                               | 9.9                                                                               |                                                                                     | 0.2                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

Intersection Summary

|                     |      |
|---------------------|------|
| HCM 2010 Ctrl Delay | 21.8 |
| HCM 2010 LOS        | C    |

Notes

User approved pedestrian interval to be less than phase max green.

2035 PM Peak Hour  
without Project with Signal

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HCM 2010 TWSC  
2: SR29 & Greystone

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| Intersection             |        |        |       |        |      |      |  |
|--------------------------|--------|--------|-------|--------|------|------|--|
| Int Delay, s/veh         | 0.4    |        |       |        |      |      |  |
| Movement                 | EBL    | EBR    | NBL   | NBT    | SBT  | SBR  |  |
| Vol, veh/h               | 4      | 6      | 28    | 785    | 957  | 17   |  |
| Conflicting Peds, #/hr   | 0      | 0      | 0     | 0      | 0    | 0    |  |
| Sign Control             | Stop   | Stop   | Free  | Free   | Free | Free |  |
| RT Channelized           | -      | None   | -     | None   | -    | None |  |
| Storage Length           | 0      | -      | 170   | -      | -    | -    |  |
| Veh in Median Storage, # | 0      | -      | -     | 0      | 0    | -    |  |
| Grade, %                 | 0      | -      | -     | 0      | 0    | -    |  |
| Peak Hour Factor         | 94     | 94     | 94    | 94     | 94   | 94   |  |
| Heavy Vehicles, %        | 0      | 0      | 0     | 8      | 6    | 0    |  |
| Mvmt Flow                | 4      | 6      | 30    | 835    | 1018 | 18   |  |
| Major/Minor              | Minor2 | Major1 |       | Major2 |      |      |  |
| Conflicting Flow All     | 1922   | 1027   | 1036  | 0      | -    | 0    |  |
| Stage 1                  | 1027   | -      | -     | -      | -    | -    |  |
| Stage 2                  | 895    | -      | -     | -      | -    | -    |  |
| Critical Hdwy            | 6.4    | 6.2    | 4.1   | -      | -    | -    |  |
| Critical Hdwy Stg 1      | 5.4    | -      | -     | -      | -    | -    |  |
| Critical Hdwy Stg 2      | 5.4    | -      | -     | -      | -    | -    |  |
| Follow-up Hdwy           | 3.5    | 3.3    | 2.2   | -      | -    | -    |  |
| Pot Cap-1 Maneuver       | 75     | 287    | 679   | -      | -    | -    |  |
| Stage 1                  | 348    | -      | -     | -      | -    | -    |  |
| Stage 2                  | 402    | -      | -     | -      | -    | -    |  |
| Platoon blocked, %       |        |        |       | -      | -    | -    |  |
| Mov Cap-1 Maneuver       | 72     | 287    | 679   | -      | -    | -    |  |
| Mov Cap-2 Maneuver       | 72     | -      | -     | -      | -    | -    |  |
| Stage 1                  | 348    | -      | -     | -      | -    | -    |  |
| Stage 2                  | 384    | -      | -     | -      | -    | -    |  |
| Approach                 | EB     | NB     |       | SB     |      |      |  |
| HCM Control Delay, s     | 34.9   | 0.4    |       | 0      |      |      |  |
| HCM LOS                  | D      |        |       |        |      |      |  |
| Minor Lane/Major Mvmt    | NBL    | NBT    | EBLn1 | SBT    | SBR  |      |  |
| Capacity (veh/h)         | 679    | -      | 131   | -      | -    |      |  |
| HCM Lane V/C Ratio       | 0.044  | -      | 0.081 | -      | -    |      |  |
| HCM Control Delay (s)    | 10.5   | -      | 34.9  | -      | -    |      |  |
| HCM Lane LOS             | B      | -      | D     | -      | -    |      |  |
| HCM 95th %tile Q(veh)    | 0.1    | -      | 0.3   | -      | -    |      |  |

2035 AM Peak Hour  
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HCM 2010 TWSC  
4: SR29 & Las Alcobas/Pratt Ave

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| Intersection               |        |                        |      |          |          |                            |        |      |      |                                |      |      |
|----------------------------|--------|------------------------|------|----------|----------|----------------------------|--------|------|------|--------------------------------|------|------|
| Int Delay, s/veh           |        | 24.9                   |      |          |          |                            |        |      |      |                                |      |      |
|                            |        |                        |      |          |          |                            |        |      |      |                                |      |      |
| Movement                   | EBL    | EBT                    | EBR  | WBL      | WBT      | WBR                        | NBL    | NBT  | NBR  | SBL                            | SBT  | SBR  |
| Vol, veh/h                 | 8      | 3                      | 8    | 63       | 4        | 21                         | 17     | 771  | 70   | 20                             | 978  | 7    |
| Conflicting Peds, #/hr     | 0      | 0                      | 0    | 5        | 0        | 5                          | 0      | 0    | 0    | 0                              | 0    | 0    |
| Sign Control               | Stop   | Stop                   | Stop | Stop     | Stop     | Stop                       | Free   | Free | Free | Free                           | Free | Free |
| RT Channelized             | -      | -                      | None | -        | -        | None                       | -      | -    | None | -                              | -    | None |
| Storage Length             | -      | -                      | -    | -        | -        | -                          | 100    | -    | -    | 70                             | -    | -    |
| Veh in Median Storage, #   | -      | 0                      | -    | -        | 0        | -                          | -      | 0    | -    | -                              | 0    | -    |
| Grade, %                   | -      | 0                      | -    | -        | 0        | -                          | -      | 0    | -    | -                              | 0    | -    |
| Peak Hour Factor           | 94     | 94                     | 94   | 94       | 94       | 94                         | 94     | 94   | 94   | 94                             | 94   | 94   |
| Heavy Vehicles, %          | 0      | 0                      | 0    | 0        | 0        | 0                          | 0      | 8    | 0    | 0                              | 6    | 0    |
| Mvmt Flow                  | 9      | 3                      | 9    | 67       | 4        | 22                         | 18     | 820  | 74   | 21                             | 1040 | 7    |
|                            |        |                        |      |          |          |                            |        |      |      |                                |      |      |
| Major/Minor                | Minor2 |                        |      | Minor1   |          |                            | Major1 |      |      | Major2                         |      |      |
| Conflicting Flow All       | 1999   | 2023                   | 1044 | 1992     | 1989     | 862                        | 1048   | 0    | 0    | 900                            | 0    | 0    |
| Stage 1                    | 1087   | 1087                   | -    | 899      | 899      | -                          | -      | -    | -    | -                              | -    | -    |
| Stage 2                    | 912    | 936                    | -    | 1093     | 1090     | -                          | -      | -    | -    | -                              | -    | -    |
| Critical Hdwy              | 7.1    | 6.5                    | 6.2  | 7.1      | 6.5      | 6.2                        | 4.1    | -    | -    | 4.1                            | -    | -    |
| Critical Hdwy Stg 1        | 6.1    | 5.5                    | -    | 6.1      | 5.5      | -                          | -      | -    | -    | -                              | -    | -    |
| Critical Hdwy Stg 2        | 6.1    | 5.5                    | -    | 6.1      | 5.5      | -                          | -      | -    | -    | -                              | -    | -    |
| Follow-up Hdwy             | 3.5    | 4                      | 3.3  | 3.5      | 4        | 3.3                        | 2.2    | -    | -    | 2.2                            | -    | -    |
| Pot Cap-1 Maneuver         | 45     | 59                     | 281  | ~ 46     | 62       | 358                        | 672    | -    | -    | 763                            | -    | -    |
| Stage 1                    | 264    | 295                    | -    | 336      | 360      | -                          | -      | -    | -    | -                              | -    | -    |
| Stage 2                    | 331    | 346                    | -    | 262      | 294      | -                          | -      | -    | -    | -                              | -    | -    |
| Platoon blocked, %         |        |                        |      |          |          |                            |        | -    | -    |                                | -    | -    |
| Mov Cap-1 Maneuver         | 38     | 56                     | 281  | ~ 41     | 58       | 357                        | 672    | -    | -    | 763                            | -    | -    |
| Mov Cap-2 Maneuver         | 38     | 56                     | -    | ~ 41     | 58       | -                          | -      | -    | -    | -                              | -    | -    |
| Stage 1                    | 257    | 287                    | -    | 326      | 349      | -                          | -      | -    | -    | -                              | -    | -    |
| Stage 2                    | 298    | 335                    | -    | 244      | 286      | -                          | -      | -    | -    | -                              | -    | -    |
|                            |        |                        |      |          |          |                            |        |      |      |                                |      |      |
| Approach                   | EB     |                        |      | WB       |          |                            | NB     |      |      | SB                             |      |      |
| HCM Control Delay, s       | 83.6   |                        |      | \$ 534.7 |          |                            | 0.2    |      |      | 0.2                            |      |      |
| HCM LOS                    | F      |                        |      | F        |          |                            |        |      |      |                                |      |      |
|                            |        |                        |      |          |          |                            |        |      |      |                                |      |      |
| Minor Lane/Major Mvmt      | NBL    | NBT                    | NBR  | EBLn1    | WBLn1    | SBL                        | SBT    | SBR  |      |                                |      |      |
| Capacity (veh/h)           | 672    | -                      | -    | 65       | 53       | 763                        | -      | -    |      |                                |      |      |
| HCM Lane V/C Ratio         | 0.027  | -                      | -    | 0.311    | 1.766    | 0.028                      | -      | -    |      |                                |      |      |
| HCM Control Delay (s)      | 10.5   | -                      | -    | 83.6     | \$ 534.7 | 9.9                        | -      | -    |      |                                |      |      |
| HCM Lane LOS               | B      | -                      | -    | F        | F        | A                          | -      | -    |      |                                |      |      |
| HCM 95th %tile Q(veh)      | 0.1    | -                      | -    | 1.1      | 9        | 0.1                        | -      | -    |      |                                |      |      |
| Notes                      |        |                        |      |          |          |                            |        |      |      |                                |      |      |
| ~: Volume exceeds capacity |        | \$: Delay exceeds 300s |      |          |          | +: Computation Not Defined |        |      |      | *: All major volume in platoon |      |      |

2035 AM Peak Hour  
with Project No Signal

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|                             |  |  |  |  |  |  |   |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                    | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations         |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |  |  |                                                                                     |  |  |                                                                                     |
| Volume (veh/h)              | 8                                                                                 | 3                                                                                 | 8                                                                                 | 63                                                                                | 4                                                                                 | 21                                                                                | 17                                                                                  | 771                                                                                 | 70                                                                                  | 20                                                                                  | 978                                                                                 | 7                                                                                   |
| Number                      | 7                                                                                 | 4                                                                                 | 14                                                                                | 3                                                                                 | 8                                                                                 | 18                                                                                | 5                                                                                   | 2                                                                                   | 12                                                                                  | 1                                                                                   | 6                                                                                   | 16                                                                                  |
| Initial Q (Qb), veh         | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ped-Bike Adj(A_pbT)         | 0.98                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 0.93                                                                              | 1.00                                                                                |                                                                                     | 0.98                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Parking Bus, Adj            | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Adj Sat Flow, veh/h/ln      | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                                | 1770                                                                                | 1900                                                                                | 1900                                                                                | 1793                                                                                | 1900                                                                                |
| Adj Flow Rate, veh/h        | 9                                                                                 | 3                                                                                 | 9                                                                                 | 67                                                                                | 4                                                                                 | 22                                                                                | 18                                                                                  | 820                                                                                 | 74                                                                                  | 21                                                                                  | 1040                                                                                | 7                                                                                   |
| Adj No. of Lanes            | 0                                                                                 | 1                                                                                 | 0                                                                                 | 0                                                                                 | 1                                                                                 | 0                                                                                 | 1                                                                                   | 1                                                                                   | 0                                                                                   | 1                                                                                   | 1                                                                                   | 0                                                                                   |
| Peak Hour Factor            | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                |
| Percent Heavy Veh, %        | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 8                                                                                   | 8                                                                                   | 0                                                                                   | 6                                                                                   | 6                                                                                   |
| Cap, veh/h                  | 142                                                                               | 46                                                                                | 66                                                                                | 219                                                                               | 6                                                                                 | 32                                                                                | 32                                                                                  | 1045                                                                                | 94                                                                                  | 37                                                                                  | 1169                                                                                | 8                                                                                   |
| Arrive On Green             | 0.09                                                                              | 0.09                                                                              | 0.09                                                                              | 0.09                                                                              | 0.09                                                                              | 0.09                                                                              | 0.02                                                                                | 0.65                                                                                | 0.65                                                                                | 0.02                                                                                | 0.66                                                                                | 0.66                                                                                |
| Sat Flow, veh/h             | 463                                                                               | 514                                                                               | 733                                                                               | 1083                                                                              | 66                                                                                | 356                                                                               | 1810                                                                                | 1597                                                                                | 144                                                                                 | 1810                                                                                | 1779                                                                                | 12                                                                                  |
| Grp Volume(v), veh/h        | 21                                                                                | 0                                                                                 | 0                                                                                 | 93                                                                                | 0                                                                                 | 0                                                                                 | 18                                                                                  | 0                                                                                   | 894                                                                                 | 21                                                                                  | 0                                                                                   | 1047                                                                                |
| Grp Sat Flow(s),veh/h/ln    | 1710                                                                              | 0                                                                                 | 0                                                                                 | 1504                                                                              | 0                                                                                 | 0                                                                                 | 1810                                                                                | 0                                                                                   | 1741                                                                                | 1810                                                                                | 0                                                                                   | 1791                                                                                |
| Q Serve(g_s), s             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 2.5                                                                               | 0.0                                                                               | 0.0                                                                               | 0.5                                                                                 | 0.0                                                                                 | 18.6                                                                                | 0.6                                                                                 | 0.0                                                                                 | 24.6                                                                                |
| Cycle Q Clear(g_c), s       | 0.6                                                                               | 0.0                                                                               | 0.0                                                                               | 3.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.5                                                                                 | 0.0                                                                                 | 18.6                                                                                | 0.6                                                                                 | 0.0                                                                                 | 24.6                                                                                |
| Prop In Lane                | 0.43                                                                              |                                                                                   | 0.43                                                                              | 0.72                                                                              |                                                                                   | 0.24                                                                              | 1.00                                                                                |                                                                                     | 0.08                                                                                | 1.00                                                                                |                                                                                     | 0.01                                                                                |
| Lane Grp Cap(c), veh/h      | 255                                                                               | 0                                                                                 | 0                                                                                 | 257                                                                               | 0                                                                                 | 0                                                                                 | 32                                                                                  | 0                                                                                   | 1140                                                                                | 37                                                                                  | 0                                                                                   | 1177                                                                                |
| V/C Ratio(X)                | 0.08                                                                              | 0.00                                                                              | 0.00                                                                              | 0.36                                                                              | 0.00                                                                              | 0.00                                                                              | 0.56                                                                                | 0.00                                                                                | 0.78                                                                                | 0.58                                                                                | 0.00                                                                                | 0.89                                                                                |
| Avail Cap(c_a), veh/h       | 597                                                                               | 0                                                                                 | 0                                                                                 | 582                                                                               | 0                                                                                 | 0                                                                                 | 142                                                                                 | 0                                                                                   | 1295                                                                                | 142                                                                                 | 0                                                                                   | 1332                                                                                |
| HCM Platoon Ratio           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Upstream Filter(I)          | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                |
| Uniform Delay (d), s/veh    | 21.4                                                                              | 0.0                                                                               | 0.0                                                                               | 22.5                                                                              | 0.0                                                                               | 0.0                                                                               | 24.9                                                                                | 0.0                                                                                 | 6.3                                                                                 | 24.8                                                                                | 0.0                                                                                 | 7.2                                                                                 |
| Incr Delay (d2), s/veh      | 0.1                                                                               | 0.0                                                                               | 0.0                                                                               | 0.9                                                                               | 0.0                                                                               | 0.0                                                                               | 14.6                                                                                | 0.0                                                                                 | 2.9                                                                                 | 13.5                                                                                | 0.0                                                                                 | 7.1                                                                                 |
| Initial Q Delay(d3),s/veh   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln    | 0.3                                                                               | 0.0                                                                               | 0.0                                                                               | 1.3                                                                               | 0.0                                                                               | 0.0                                                                               | 0.4                                                                                 | 0.0                                                                                 | 9.6                                                                                 | 0.4                                                                                 | 0.0                                                                                 | 14.0                                                                                |
| LnGrp Delay(d),s/veh        | 21.5                                                                              | 0.0                                                                               | 0.0                                                                               | 23.3                                                                              | 0.0                                                                               | 0.0                                                                               | 39.5                                                                                | 0.0                                                                                 | 9.1                                                                                 | 38.3                                                                                | 0.0                                                                                 | 14.4                                                                                |
| LnGrp LOS                   | C                                                                                 |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | D                                                                                   |                                                                                     | A                                                                                   | D                                                                                   |                                                                                     | B                                                                                   |
| Approach Vol, veh/h         | 21                                                                                |                                                                                   |                                                                                   | 93                                                                                |                                                                                   |                                                                                   | 912                                                                                 |                                                                                     |                                                                                     | 1068                                                                                |                                                                                     |                                                                                     |
| Approach Delay, s/veh       | 21.5                                                                              |                                                                                   |                                                                                   | 23.3                                                                              |                                                                                   |                                                                                   | 9.7                                                                                 |                                                                                     |                                                                                     | 14.8                                                                                |                                                                                     |                                                                                     |
| Approach LOS                | C                                                                                 |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | A                                                                                   |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |                                                                                     |
| Timer                       | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7                                                                                   | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Assigned Phs                | 1                                                                                 | 2                                                                                 |                                                                                   | 4                                                                                 | 5                                                                                 | 6                                                                                 |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s    | 5.0                                                                               | 37.5                                                                              |                                                                                   | 8.6                                                                               | 4.9                                                                               | 37.6                                                                              |                                                                                     | 8.6                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Change Period (Y+Rc), s     | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               | 4.0                                                                               |                                                                                     | 4.0                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Green Setting (Gmax),s  | 40                                                                                | 38.0                                                                              |                                                                                   | 16.0                                                                              | 4.0                                                                               | 38.0                                                                              |                                                                                     | 16.0                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1),s | 4                                                                                 | 20.6                                                                              |                                                                                   | 2.6                                                                               | 2.5                                                                               | 26.6                                                                              |                                                                                     | 5.0                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s     | 0.0                                                                               | 9.1                                                                               |                                                                                   | 0.2                                                                               | 0.0                                                                               | 6.9                                                                               |                                                                                     | 0.2                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2010 Ctrl Delay         | 13.1                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2010 LOS                | B                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

2035 AM Peak Hour  
with Project with Signal

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HCM 2010 TWSC  
2: SR29 & Greystone

22/06/2016

| Intersection             |        |      |        |      |        |      |  |
|--------------------------|--------|------|--------|------|--------|------|--|
| Int Delay, s/veh         | 1.4    |      |        |      |        |      |  |
| Movement                 | EBL    | EBR  | NBL    | NBT  | SBT    | SBR  |  |
| Vol, veh/h               | 19     | 28   | 12     | 1116 | 895    | 7    |  |
| Conflicting Peds, #/hr   | 0      | 0    | 0      | 0    | 0      | 0    |  |
| Sign Control             | Stop   | Stop | Free   | Free | Free   | Free |  |
| RT Channelized           | -      | None | -      | None | -      | None |  |
| Storage Length           | 0      | -    | 170    | -    | -      | -    |  |
| Veh in Median Storage, # | 0      | -    | -      | 0    | 0      | -    |  |
| Grade, %                 | 0      | -    | -      | 0    | 0      | -    |  |
| Peak Hour Factor         | 98     | 98   | 98     | 98   | 98     | 98   |  |
| Heavy Vehicles, %        | 0      | 0    | 0      | 8    | 6      | 0    |  |
| Mvmt Flow                | 19     | 29   | 12     | 1139 | 913    | 7    |  |
| Major/Minor              | Minor2 |      | Major1 |      | Major2 |      |  |
| Conflicting Flow All     | 2080   | 917  | 920    | 0    | -      | 0    |  |
| Stage 1                  | 917    | -    | -      | -    | -      | -    |  |
| Stage 2                  | 1163   | -    | -      | -    | -      | -    |  |
| Critical Hdwy            | 6.4    | 6.2  | 4.1    | -    | -      | -    |  |
| Critical Hdwy Stg 1      | 5.4    | -    | -      | -    | -      | -    |  |
| Critical Hdwy Stg 2      | 5.4    | -    | -      | -    | -      | -    |  |
| Follow-up Hdwy           | 3.5    | 3.3  | 2.2    | -    | -      | -    |  |
| Pot Cap-1 Maneuver       | 59     | 332  | 750    | -    | -      | -    |  |
| Stage 1                  | 393    | -    | -      | -    | -      | -    |  |
| Stage 2                  | 300    | -    | -      | -    | -      | -    |  |
| Platoon blocked, %       |        |      |        | -    | -      | -    |  |
| Mov Cap-1 Maneuver       | 58     | 332  | 750    | -    | -      | -    |  |
| Mov Cap-2 Maneuver       | 58     | -    | -      | -    | -      | -    |  |
| Stage 1                  | 393    | -    | -      | -    | -      | -    |  |
| Stage 2                  | 295    | -    | -      | -    | -      | -    |  |
| Approach                 | EB     |      | NB     |      | SB     |      |  |
| HCM Control Delay, s     | 57.8   |      | 0.1    |      | 0      |      |  |
| HCM LOS                  | F      |      |        |      |        |      |  |
| Minor Lane/Major Mvmt    | NBL    | NB   | EBLn1  | SBT  | SBR    |      |  |
| Capacity (veh/h)         | 750    | -    | 114    | -    | -      |      |  |
| HCM Lane V/C Ratio       | 0.016  | -    | 0.421  | -    | -      |      |  |
| HCM Control Delay (s)    | 9.9    | -    | 57.8   | -    | -      |      |  |
| HCM Lane LOS             | A      | -    | F      | -    | -      |      |  |
| HCM 95th %tile Q(veh)    | 0.1    | -    | 1.8    | -    | -      |      |  |

2035 PM Peak Hour  
with Project

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HCM 2010 TWSC  
4: SR29 & Las Alcobas/Pratt Ave

22/06/2016

| Intersection               |        |                        |      |          |          |                            |        |      |      |                                |      |      |
|----------------------------|--------|------------------------|------|----------|----------|----------------------------|--------|------|------|--------------------------------|------|------|
| Int Delay, s/veh           |        | 36.3                   |      |          |          |                            |        |      |      |                                |      |      |
|                            |        |                        |      |          |          |                            |        |      |      |                                |      |      |
| Movement                   | EBL    | EBT                    | EBR  | WBL      | WBT      | WBR                        | NBL    | NBT  | NBR  | SBL                            | SBT  | SBR  |
| Vol, veh/h                 | 7      | 4                      | 16   | 63       | 4        | 21                         | 13     | 1083 | 59   | 25                             | 910  | 9    |
| Conflicting Peds, #/hr     | 0      | 0                      | 0    | 5        | 0        | 5                          | 0      | 0    | 0    | 0                              | 0    | 0    |
| Sign Control               | Stop   | Stop                   | Stop | Stop     | Stop     | Stop                       | Free   | Free | Free | Free                           | Free | Free |
| RT Channelized             | -      | -                      | None | -        | -        | None                       | -      | -    | None | -                              | -    | None |
| Storage Length             | -      | -                      | -    | -        | -        | -                          | 100    | -    | -    | 70                             | -    | -    |
| Veh in Median Storage, #   | -      | 0                      | -    | -        | 0        | -                          | -      | 0    | -    | -                              | 0    | -    |
| Grade, %                   | -      | 0                      | -    | -        | 0        | -                          | -      | 0    | -    | -                              | 0    | -    |
| Peak Hour Factor           | 98     | 98                     | 98   | 98       | 98       | 98                         | 98     | 98   | 98   | 98                             | 98   | 98   |
| Heavy Vehicles, %          | 0      | 0                      | 0    | 0        | 0        | 0                          | 0      | 8    | 0    | 0                              | 6    | 0    |
| Mvmt Flow                  | 7      | 4                      | 16   | 64       | 4        | 21                         | 13     | 1105 | 60   | 26                             | 929  | 9    |
|                            |        |                        |      |          |          |                            |        |      |      |                                |      |      |
| Major/Minor                | Minor2 |                        |      | Minor1   |          |                            | Major1 |      |      | Major2                         |      |      |
| Conflicting Flow All       | 2163   | 2181                   | 933  | 2161     | 2156     | 1140                       | 938    | 0    | 0    | 1170                           | 0    | 0    |
| Stage 1                    | 984    | 984                    | -    | 1167     | 1167     | -                          | -      | -    | -    | -                              | -    | -    |
| Stage 2                    | 1179   | 1197                   | -    | 994      | 989      | -                          | -      | -    | -    | -                              | -    | -    |
| Critical Hdwy              | 7.1    | 6.5                    | 6.2  | 7.1      | 6.5      | 6.2                        | 4.1    | -    | -    | 4.1                            | -    | -    |
| Critical Hdwy Stg 1        | 6.1    | 5.5                    | -    | 6.1      | 5.5      | -                          | -      | -    | -    | -                              | -    | -    |
| Critical Hdwy Stg 2        | 6.1    | 5.5                    | -    | 6.1      | 5.5      | -                          | -      | -    | -    | -                              | -    | -    |
| Follow-up Hdwy             | 3.5    | 4                      | 3.3  | 3.5      | 4        | 3.3                        | 2.2    | -    | -    | 2.2                            | -    | -    |
| Pot Cap-1 Maneuver         | 35     | 47                     | 325  | ~ 35     | 48       | 247                        | 739    | -    | -    | 604                            | -    | -    |
| Stage 1                    | 302    | 329                    | -    | 238      | 270      | -                          | -      | -    | -    | -                              | -    | -    |
| Stage 2                    | 234    | 261                    | -    | 298      | 327      | -                          | -      | -    | -    | -                              | -    | -    |
| Platoon blocked, %         |        |                        |      |          |          |                            |        | -    | -    |                                | -    | -    |
| Mov Cap-1 Maneuver         | 28     | 44                     | 325  | ~ 29     | 45       | 246                        | 739    | -    | -    | 604                            | -    | -    |
| Mov Cap-2 Maneuver         | 28     | 44                     | -    | ~ 29     | 45       | -                          | -      | -    | -    | -                              | -    | -    |
| Stage 1                    | 297    | 315                    | -    | 233      | 264      | -                          | -      | -    | -    | -                              | -    | -    |
| Stage 2                    | 207    | 255                    | -    | 267      | 313      | -                          | -      | -    | -    | -                              | -    | -    |
|                            |        |                        |      |          |          |                            |        |      |      |                                |      |      |
| Approach                   | EB     |                        |      | WB       |          |                            | NB     |      |      | SB                             |      |      |
| HCM Control Delay, s       | 88.3   |                        |      | \$ 880.9 |          |                            | 0.1    |      |      | 0.3                            |      |      |
| HCM LOS                    | F      |                        |      | F        |          |                            |        |      |      |                                |      |      |
|                            |        |                        |      |          |          |                            |        |      |      |                                |      |      |
| Minor Lane/Major Mvmt      | NBL    | NBT                    | NBR  | EBLn1    | WBLn1    | SBL                        | SBT    | SBR  |      |                                |      |      |
| Capacity (veh/h)           | 739    | -                      | -    | 69       | 37       | 604                        | -      | -    |      |                                |      |      |
| HCM Lane V/C Ratio         | 0.018  | -                      | -    | 0.399    | 2.427    | 0.042                      | -      | -    |      |                                |      |      |
| HCM Control Delay (s)      | 10     | -                      | -    | \$ 880.9 | \$ 880.9 | 11.2                       | -      | -    |      |                                |      |      |
| HCM Lane LOS               | A      | -                      | -    | F        | F        | B                          | -      | -    |      |                                |      |      |
| HCM 95th %tile Q(veh)      | 0.1    | -                      | -    | 1.5      | 10       | 0.1                        | -      | -    |      |                                |      |      |
| Notes                      |        |                        |      |          |          |                            |        |      |      |                                |      |      |
| ~: Volume exceeds capacity |        | \$: Delay exceeds 300s |      |          |          | +: Computation Not Defined |        |      |      | *: All major volume in platoon |      |      |

2035 PM Peak Hour  
with Project No Signal

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HCM 2010 Signalized Intersection Summary  
4: SR29 & Las Alcobas/Pratt Ave

22/06/2016

|                                                                    |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--|--|--|--|--|--|
| Movement                                                           | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |  |  |  |  |  |  |
| Lane Configurations                                                |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |  |  |                                                                                     |  |  |                                                                                     |  |  |  |  |  |  |
| Volume (veh/h)                                                     | 7                                                                                 | 4                                                                                 | 16                                                                                | 63                                                                                | 4                                                                                 | 21                                                                                | 13                                                                                  | 1083                                                                                | 59                                                                                  | 25                                                                                  | 910                                                                                 | 9                                                                                   |  |  |  |  |  |  |
| Number                                                             | 7                                                                                 | 4                                                                                 | 14                                                                                | 3                                                                                 | 8                                                                                 | 18                                                                                | 5                                                                                   | 2                                                                                   | 12                                                                                  | 1                                                                                   | 6                                                                                   | 16                                                                                  |  |  |  |  |  |  |
| Initial Q (Qb), veh                                                | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |  |  |  |  |  |  |
| Ped-Bike Adj(A_pbT)                                                | 0.98                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 0.93                                                                              | 1.00                                                                                |                                                                                     | 0.98                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |  |  |  |  |  |  |
| Parking Bus, Adj                                                   | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |  |  |  |  |  |  |
| Adj Sat Flow, veh/h/ln                                             | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                                | 1766                                                                                | 1900                                                                                | 1900                                                                                | 1793                                                                                | 1900                                                                                |  |  |  |  |  |  |
| Adj Flow Rate, veh/h                                               | 7                                                                                 | 4                                                                                 | 16                                                                                | 64                                                                                | 4                                                                                 | 21                                                                                | 13                                                                                  | 1105                                                                                | 60                                                                                  | 26                                                                                  | 929                                                                                 | 9                                                                                   |  |  |  |  |  |  |
| Adj No. of Lanes                                                   | 0                                                                                 | 1                                                                                 | 0                                                                                 | 0                                                                                 | 1                                                                                 | 0                                                                                 | 1                                                                                   | 1                                                                                   | 0                                                                                   | 1                                                                                   | 1                                                                                   | 0                                                                                   |  |  |  |  |  |  |
| Peak Hour Factor                                                   | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                |  |  |  |  |  |  |
| Percent Heavy Veh, %                                               | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 8                                                                                   | 8                                                                                   | 0                                                                                   | 6                                                                                   | 6                                                                                   |  |  |  |  |  |  |
| Cap, veh/h                                                         | 104                                                                               | 38                                                                                | 88                                                                                | 203                                                                               | 8                                                                                 | 31                                                                                | 24                                                                                  | 1120                                                                                | 61                                                                                  | 43                                                                                  | 1217                                                                                | 12                                                                                  |  |  |  |  |  |  |
| Arrive On Green                                                    | 0.09                                                                              | 0.09                                                                              | 0.09                                                                              | 0.09                                                                              | 0.09                                                                              | 0.09                                                                              | 0.01                                                                                | 0.68                                                                                | 0.68                                                                                | 0.02                                                                                | 0.69                                                                                | 0.69                                                                                |  |  |  |  |  |  |
| Sat Flow, veh/h                                                    | 263                                                                               | 431                                                                               | 1009                                                                              | 1067                                                                              | 90                                                                                | 357                                                                               | 1810                                                                                | 1658                                                                                | 90                                                                                  | 1810                                                                                | 1773                                                                                | 17                                                                                  |  |  |  |  |  |  |
| Grp Volume(v), veh/h                                               | 27                                                                                | 0                                                                                 | 0                                                                                 | 89                                                                                | 0                                                                                 | 0                                                                                 | 13                                                                                  | 0                                                                                   | 1165                                                                                | 26                                                                                  | 0                                                                                   | 938                                                                                 |  |  |  |  |  |  |
| Grp Sat Flow(s),veh/h/ln                                           | 1703                                                                              | 0                                                                                 | 0                                                                                 | 1514                                                                              | 0                                                                                 | 0                                                                                 | 1810                                                                                | 0                                                                                   | 1748                                                                                | 1810                                                                                | 0                                                                                   | 1790                                                                                |  |  |  |  |  |  |
| Q Serve(g_s), s                                                    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 2.3                                                                               | 0.0                                                                               | 0.0                                                                               | 0.4                                                                                 | 0.0                                                                                 | 36.5                                                                                | 0.8                                                                                 | 0.0                                                                                 | 19.4                                                                                |  |  |  |  |  |  |
| Cycle Q Clear(g_c), s                                              | 0.8                                                                               | 0.0                                                                               | 0.0                                                                               | 3.1                                                                               | 0.0                                                                               | 0.0                                                                               | 0.4                                                                                 | 0.0                                                                                 | 36.5                                                                                | 0.8                                                                                 | 0.0                                                                                 | 19.4                                                                                |  |  |  |  |  |  |
| Prop In Lane                                                       | 0.26                                                                              |                                                                                   | 0.59                                                                              | 0.72                                                                              |                                                                                   | 0.24                                                                              | 1.00                                                                                |                                                                                     | 0.05                                                                                | 1.00                                                                                |                                                                                     | 0.01                                                                                |  |  |  |  |  |  |
| Lane Grp Cap(c), veh/h                                             | 230                                                                               | 0                                                                                 | 0                                                                                 | 243                                                                               | 0                                                                                 | 0                                                                                 | 24                                                                                  | 0                                                                                   | 1180                                                                                | 43                                                                                  | 0                                                                                   | 1228                                                                                |  |  |  |  |  |  |
| V/C Ratio(X)                                                       | 0.12                                                                              | 0.00                                                                              | 0.00                                                                              | 0.37                                                                              | 0.00                                                                              | 0.00                                                                              | 0.55                                                                                | 0.00                                                                                | 0.99                                                                                | 0.61                                                                                | 0.00                                                                                | 0.76                                                                                |  |  |  |  |  |  |
| Avail Cap(c_a), veh/h                                              | 541                                                                               | 0                                                                                 | 0                                                                                 | 528                                                                               | 0                                                                                 | 0                                                                                 | 129                                                                                 | 0                                                                                   | 1180                                                                                | 129                                                                                 | 0                                                                                   | 1228                                                                                |  |  |  |  |  |  |
| HCM Platoon Ratio                                                  | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |  |  |  |  |  |  |
| Upstream Filter(I)                                                 | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                |  |  |  |  |  |  |
| Uniform Delay (d), s/veh                                           | 23.8                                                                              | 0.0                                                                               | 0.0                                                                               | 24.8                                                                              | 0.0                                                                               | 0.0                                                                               | 27.6                                                                                | 0.0                                                                                 | 8.9                                                                                 | 27.2                                                                                | 0.0                                                                                 | 5.8                                                                                 |  |  |  |  |  |  |
| Incr Delay (d2), s/veh                                             | 0.2                                                                               | 0.0                                                                               | 0.0                                                                               | 0.9                                                                               | 0.0                                                                               | 0.0                                                                               | 18.4                                                                                | 0.0                                                                                 | 23.3                                                                                | 12.9                                                                                | 0.0                                                                                 | 4.5                                                                                 |  |  |  |  |  |  |
| Initial Q Delay(d3),s/veh                                          | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |  |  |  |  |  |  |
| %ile BackOfQ(50%),veh/ln                                           | 0.4                                                                               | 0.0                                                                               | 0.0                                                                               | 1.4                                                                               | 0.0                                                                               | 0.0                                                                               | 0.3                                                                                 | 0.0                                                                                 | 24.5                                                                                | 0.6                                                                                 | 0.0                                                                                 | 10.9                                                                                |  |  |  |  |  |  |
| LnGrp Delay(d),s/veh                                               | 24.0                                                                              | 0.0                                                                               | 0.0                                                                               | 25.7                                                                              | 0.0                                                                               | 0.0                                                                               | 46.0                                                                                | 0.0                                                                                 | 32.1                                                                                | 40.1                                                                                | 0.0                                                                                 | 10.4                                                                                |  |  |  |  |  |  |
| LnGrp LOS                                                          | C                                                                                 |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | D                                                                                   |                                                                                     | C                                                                                   | D                                                                                   |                                                                                     | B                                                                                   |  |  |  |  |  |  |
| Approach Vol, veh/h                                                | 27                                                                                |                                                                                   |                                                                                   | 89                                                                                |                                                                                   |                                                                                   | 1178                                                                                |                                                                                     |                                                                                     | 964                                                                                 |                                                                                     |                                                                                     |  |  |  |  |  |  |
| Approach Delay, s/veh                                              | 24.0                                                                              |                                                                                   |                                                                                   | 25.7                                                                              |                                                                                   |                                                                                   | 32.3                                                                                |                                                                                     |                                                                                     | 11.2                                                                                |                                                                                     |                                                                                     |  |  |  |  |  |  |
| Approach LOS                                                       | C                                                                                 |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | C                                                                                   |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |                                                                                     |  |  |  |  |  |  |
| Timer                                                              | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7                                                                                   | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |  |  |  |  |  |
| Assigned Phs                                                       | 1                                                                                 | 2                                                                                 |                                                                                   |                                                                                   | 4                                                                                 | 5                                                                                 | 6                                                                                   | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |  |  |  |  |  |
| Phs Duration (G+Y+Rc), s                                           | 5.3                                                                               | 42.0                                                                              |                                                                                   |                                                                                   | 8.9                                                                               | 4.7                                                                               | 42.6                                                                                | 8.9                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |  |  |  |  |  |
| Change Period (Y+Rc), s                                            | 4.0                                                                               | 4.0                                                                               |                                                                                   |                                                                                   | 4.0                                                                               | 4.0                                                                               | 4.0                                                                                 | 4.0                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |  |  |  |  |  |
| Max Green Setting (Gmax),s                                         | 40.0                                                                              | 38.0                                                                              |                                                                                   |                                                                                   | 16.0                                                                              | 4.0                                                                               | 38.0                                                                                | 16.0                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |  |  |  |  |  |
| Max Q Clear Time (g_c+I1),s                                        | 4.0                                                                               | 38.5                                                                              |                                                                                   |                                                                                   | 2.8                                                                               | 2.4                                                                               | 21.4                                                                                | 5.1                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |  |  |  |  |  |
| Green Ext Time (p_c), s                                            | 0.0                                                                               | 0.0                                                                               |                                                                                   |                                                                                   | 0.3                                                                               | 0.0                                                                               | 10.0                                                                                | 0.2                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |  |  |  |  |  |
| <b>Intersection Summary</b>                                        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |  |  |  |  |  |
| HCM 2010 Ctrl Delay                                                | 22.9                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |  |  |  |  |  |
| HCM 2010 LOS                                                       | C                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |  |  |  |  |  |
| <b>Notes</b>                                                       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |  |  |  |  |  |
| User approved pedestrian interval to be less than phase max green. |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |  |  |  |  |  |

2035 PM Peak Hour  
with Project with Signal

Synchro 8 Report  
Page 1

## **SIGNAL WARRANTS**

## Appendix

### SIGNAL WARRANT DEFINITIONS (California Manual on Uniform Traffic Control Devices\*)

#### Section 4C.02 Warrant 1, Eight-Hour Vehicular Volume

**Support:**

The Minimum Vehicular Volume, Condition A, is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal.

The Interruption of Continuous Traffic, Condition B, is intended for application at locations where Condition A is not satisfied and where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street.

It is intended that Warrant 1 be treated as a single warrant. If Condition A is satisfied, then the criteria for Warrant 1 is satisfied and Condition B and the combination of Conditions A and B are not needed. Similarly, if Condition B is satisfied, then the criteria for Warrant 1 is satisfied and the combination of Conditions A and B is not needed.

**Standard:**

**The need for a traffic control signal shall be considered if an engineering study finds that one of the following conditions exist for each of any 8 hours of an average day:**

- A. The vehicles per hour given in both of the 100 percent columns of Condition A in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection; or**
- B. The vehicles per hour given in both of the 100 percent columns of Condition B in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection.**

**In applying each condition the major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of these 8 hours.**

**Option:**

If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 64 km/h or exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, the traffic volumes in the 70 percent columns in Table 4C-1 may be used in place of the 100 percent columns.

**Guidance:**

The combination of Conditions A and B is intended for application at locations where Condition A is not satisfied and Condition B is not satisfied and should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.

**Standard:**

**The need for a traffic control signal shall be considered if an engineering study finds that one of the following conditions exist for each of any 8 hours of an average day:**

- A. The vehicles per hour given in both of the 80 percent columns of Condition A in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection; and**

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\* FHWA's MUTCD 2014 edition (FHWA's MUTCD 2009 Edition, including Revisions 1 & 2, as amended for use in California)

- B. The vehicles per hour given in both of the 80 percent columns of Condition B in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection.**

**These major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied in Condition A shall not be required to be the same 8 hours satisfied in Condition B. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.**

Option:

If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 64 km/h or exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, the traffic volumes in the 56 percent columns in Table 4C-1 may be used in place of the 80 percent columns.

### **Section 4C.04 Warrant 3, Peak Hour**

Support:

The Peak Hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street.

**Standard:**

**This signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.**

**The need for a traffic control signal shall be considered if an engineering study finds that the criteria in either of the following two categories are met:**

- A. If all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:**
- 1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and**
  - 2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and**
  - 3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.**
- B. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day falls above the applicable curve in Figure 4C-3 for the existing combination of approach lanes.**

Option:

If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 64 km/h or exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, Figure 4C-4 may be used in place of Figure 4C-3 to satisfy the criteria in the second category of the Standard.

### **Section 4C.08 Warrant 7, Crash Experience**

Support:

The Crash Experience signal warrant conditions are intended for application where the severity and frequency of crashes are the principal reasons to consider installing a traffic control signal.

Standard:

The need for a traffic control signal shall be considered if an engineering study finds that all of the following criteria are met:

- A. Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency; and**
- B. Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash; and**
- C. For each of any 8 hours of an average day, the vehicles per hour (vph) given in both of the 80 percent columns of Condition A in Table 4C-1 (see Section 4C.02), or the vph in both of the 80 percent columns of Condition B in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80 percent of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.**

Option:

If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, the traffic volumes in the 56 percent columns in Table 4C-1 may be used in place of the 80 percent columns.

*Source: California MUTCD, Chapter 4C – Traffic Control Signal Needs Studies*



Table A-1

**S.R.29-128 (Main Street)/PRATT AVENUE INTERSECTION  
SIGNAL WARRANT #1 EVALUATION**

**8 HIGHEST TRAFFIC VOLUME HOURS**

**EXISTING SUMMER VOLUMES**

|                                                      | 4:00-<br>5:00 PM | 3:00-<br>4:00 PM | 5:00-<br>6:00 PM | 2:00-<br>3:00 PM | 1:00-2:00<br>PM | Noon-<br>1:00 PM | 10:00 –<br>11:00 AM | 8:00 –<br>9:00 AM |
|------------------------------------------------------|------------------|------------------|------------------|------------------|-----------------|------------------|---------------------|-------------------|
| Sum of S.R.29-<br>128 (Main<br>Street)<br>Approaches | 1345             | 1288             | 1281             | 1143             | 1142            | 1035             | 1035                | 1005              |
| Pratt Avenue<br>Approach                             | 84               | 91               | 51               | 72               | 57              | 69               | 51                  | 64                |

**EXISTING SUMMER + PROJECT VOLUMES**

|                                                      | 4:00-<br>5:00 PM | 3:00-<br>4:00 PM | 5:00-<br>6:00 PM | 2:00-<br>3:00 PM | 1:00-2:00<br>PM | Noon-<br>1:00 PM | 10:00 –<br>11:00 AM | 8:00 –<br>9:00 AM |
|------------------------------------------------------|------------------|------------------|------------------|------------------|-----------------|------------------|---------------------|-------------------|
| Sum of S.R.29-<br>128 (Main<br>Street)<br>Approaches | 1345             | 1288             | 1281             | 1143             | 1142            | 1035             | 1035                | 1005              |
| Pratt Avenue<br>Approach                             | 88               | 95               | 55               | 76               | 61              | 73               | 55                  | 68                |

**YEAR 2018 VOLUMES**

**(The Pratt Avenue approach shows the additional  
Las Alcobas Hotel volumes: 4 westbound vehicles)**

|                                                   | 4:00-5:00<br>PM | 5:00-<br>6:00 PM | 3:00-<br>4:00 PM | 2:00-<br>3:00 PM | 8:00-<br>9:00 AM | Noon-<br>1:00 PM | 11:00<br>AM-Noon | 1:00-<br>2:00 PM |
|---------------------------------------------------|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Sum of S.R.29-<br>128 (Main Street)<br>Approaches | 1418            | 1359             | 1351             | 1209             | 1209             | 1096             | 1096             | 1065             |
| Pratt Avenue<br>Approach                          | 88              | 95               | 55               | 72               | 57               | 69               | 51               | 64               |

**YEAR 2018 + PROJECT VOLUMES**  
**(The Project adds an additional 4 westbound vehicles**  
**to the Pratt Avenue Approach)**

|                                                   | 4:00-5:00<br>PM | 5:00-<br>6:00 PM | 3:00-<br>4:00 PM | 2:00-<br>3:00 PM | 8:00-<br>9:00 AM | Noon-<br>1:00 PM | 11:00<br>AM-Noon | 1:00-<br>2:00<br>PM |
|---------------------------------------------------|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|---------------------|
| Sum of S.R.29-<br>128 (Main Street)<br>Approaches | 1397            | 1338             | 1330             | 1188             | 1193             | 1075             | 1080             | 1044                |
| Pratt Avenue<br>Approach                          | 92              | 99               | 59               | 76               | 61               | 73               | 55               | 69                  |

**YEAR 2035 VOLUMES**

|                                                   | 4:00-5:00<br>PM | 5:00-<br>6:00 PM | 3:00-<br>4:00 PM | 2:00-<br>3:00 PM | 8:00-<br>9:00 AM | Noon-<br>1:00 PM | 11:00<br>AM-Noon | 1:00-<br>2:00 PM |
|---------------------------------------------------|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Sum of S.R.29-<br>128 (Main Street)<br>Approaches | 2078            | 1991             | 1980             | 1773             | 1847             | 1745             | 1745             | 1561             |
| Pratt Avenue<br>Approach                          | 88              | 95               | 55               | 72               | 57               | 69               | 51               | 64               |

**YEAR 2035 + PROJECT VOLUMES**  
**(The Project adds an additional 4 westbound vehicles**  
**to the Pratt Avenue Approach)**

|                                                   | 4:00-5:00<br>PM | 5:00-<br>6:00 PM | 3:00-<br>4:00 PM | 2:00-<br>3:00 PM | 8:00-<br>9:00 AM | Noon-<br>1:00 PM | 11:00<br>AM-Noon | 1:00-<br>2:00 PM |
|---------------------------------------------------|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Sum of S.R.29-<br>128 (Main Street)<br>Approaches | 2149            | 1970             | 1959             | 1752             | 1831             | 1724             | 1729             | 1540             |
| Pratt Avenue<br>Approach                          | 92              | 99               | 59               | 76               | 61               | 73               | 55               | 69               |

**WARRANT #1 VOLUME CRITERIA LEVELS**  
**SINGLE LANE MAJOR STREET APPROACHES AND**  
**SINGLE LANE SIDE STREET APPROACH**

|                               | <b>CONDITION A<br/>MINIMUM<br/>VOLUME<br/>@ 100%</b> | <b>CONDITION B<br/>INTERRUPTION OF<br/>CONTINUOUS<br/>TRAFFIC<br/>@ 100%</b> |
|-------------------------------|------------------------------------------------------|------------------------------------------------------------------------------|
| Total Major Street Approaches | 500                                                  | 750                                                                          |
| Minor Street Approach         | 150                                                  | 75                                                                           |

|                                  | <b>CONDITION A<br/>MINIMUM<br/>VOLUME<br/>@ 80%</b> | <b>CONDITION B<br/>INTERRUPTION OF<br/>CONTINUOUS<br/>TRAFFIC @ 80%</b> |
|----------------------------------|-----------------------------------------------------|-------------------------------------------------------------------------|
| Total of Major Street Approaches | 400                                                 | 600                                                                     |
| Minor Street Approach            | 120                                                 | 60                                                                      |

Source: California MUTCD, Chapter 4C – Traffic Control Signal Needs Studies (see Table 4C-1, below)  
Compiled by Crane Transportation Group

### Appendix

## California MUTCD Table 4C-1

### WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME

| <b>Condition A – Minimum Vehicular Volume</b>       |              |                                                              |                  |                  |                  |                                                                               |                  |                  |                  |
|-----------------------------------------------------|--------------|--------------------------------------------------------------|------------------|------------------|------------------|-------------------------------------------------------------------------------|------------------|------------------|------------------|
| Number of lanes for moving traffic on each approach |              | Vehicles per hour on major street (total of both approaches) |                  |                  |                  | Vehicles per hour on higher-volume minor-street approach (one direction only) |                  |                  |                  |
| Major Street                                        | Minor Street | 100% <sup>a</sup>                                            | 80% <sup>b</sup> | 70% <sup>c</sup> | 56% <sup>d</sup> | 100% <sup>a</sup>                                                             | 80% <sup>b</sup> | 70% <sup>c</sup> | 56% <sup>d</sup> |
| 1.....                                              | 1.....       | <b>500</b>                                                   | <b>400</b>       | 350              | 280              | <b>150</b>                                                                    | <b>120</b>       | 105              | 84               |
| 2 or more                                           | 1.....       | 600                                                          | 480              | 420              | 336              | 150                                                                           | 120              | 105              | 84               |
| 2 or more                                           | 2 or more    | 600                                                          | 480              | 420              | 336              | 200                                                                           | 160              | 140              | 112              |
| 1.....                                              | 2 or more    | 500                                                          | 400              | 350              | 280              | 200                                                                           | 160              | 140              | 112              |

| <b>Condition B – Interruption of Continuous Traffic</b> |              |                                                              |                  |                  |                  |                                                                               |                  |                  |                  |
|---------------------------------------------------------|--------------|--------------------------------------------------------------|------------------|------------------|------------------|-------------------------------------------------------------------------------|------------------|------------------|------------------|
| Number of lanes for moving traffic on each approach     |              | Vehicles per hour on major street (total of both approaches) |                  |                  |                  | Vehicles per hour on higher-volume minor-street approach (one direction only) |                  |                  |                  |
| Major Street                                            | Minor Street | 100% <sup>a</sup>                                            | 80% <sup>b</sup> | 70% <sup>c</sup> | 56% <sup>d</sup> | 100% <sup>a</sup>                                                             | 80% <sup>b</sup> | 70% <sup>c</sup> | 56% <sup>d</sup> |
| 1.....                                                  | 1.....       | <b>750</b>                                                   | <b>600</b>       | 525              | 420              | <b>75</b>                                                                     | <b>60</b>        | 53               | 42               |
| 2 or more                                               | 1.....       | 900                                                          | 720              | 630              | 504              | 75                                                                            | 60               | 53               | 42               |
| 2 or more                                               | 2 or more    | 900                                                          | 720              | 630              | 504              | 100                                                                           | 80               | 70               | 56               |
| 1.....                                                  | 2 or more    | 750                                                          | 600              | 525              | 420              | 100                                                                           | 80               | 70               | 56               |

- a. Basic minimum hourly volume.
- b. Used for combination of Conditions A and B after adequate trial of other remedial measures.
- c. May be used when the major-street speed exceeds 64 km/h or exceeds 40 mph or in an isolated community with a population of less than 10,000.
- d. May be used for combination of Conditions A and B after adequate trial of other remedial measures when the major-street speed exceeds 64 km/h or exceeds 40 mph or in an isolated community with a population of less than 10,000.

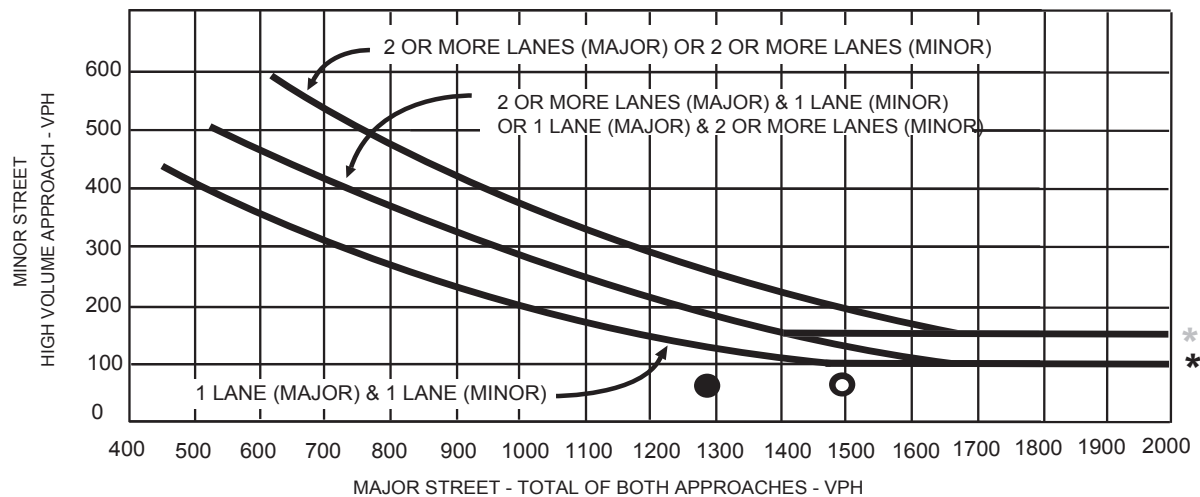
Source: California MUTCD, Chapter 4C – Traffic Control Signal Needs Studies



## Pratt Avenue/Main St (SR29-128)

### PEAK HOUR VOLUME WARRANT #3

Urban Area



#### 2016 Weekday AM Peak Hour with Project

71 vehicles minor approach  
1285 vehicles major approaches

#### 2016 Weekday PM Peak Hour with Project

70 vehicles minor approach  
1493 vehicles major approaches

#### \* NOTE

150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE

Source: Year 2010 Manual on Uniform Traffic Control Devices, Federal Highway Administration



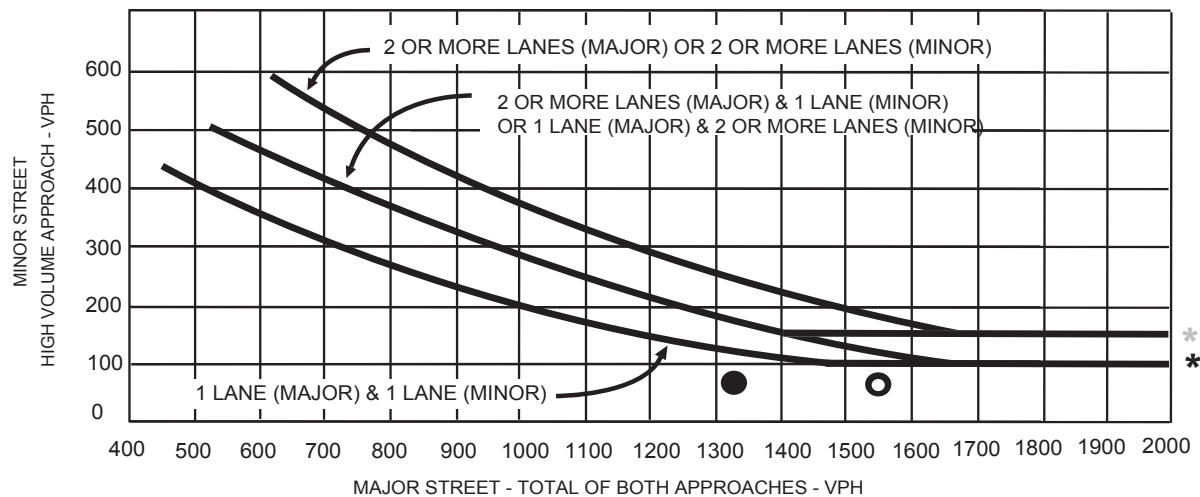
CRANE TRANSPORTATION GROUP

**Appendix Figure 1**  
**Pratt Ave/Main St (SR29-128)**  
**Existing AM and PM With Project**  
**Signal Warrant #3**

## Pratt Avenue/Main St (SR29-128)

### PEAK HOUR VOLUME WARRANT #3

Urban Area



#### 2018 Weekday AM Peak Hour with Project

● 74 vehicles minor approach  
1337 vehicles major approaches

#### 2018 Weekday PM Peak Hour with Project

○ 72 vehicles minor approach  
1554 vehicles major approaches

#### \* NOTE

150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE

Source: Year 2010 Manual on Uniform Traffic Control Devices, Federal Highway Administration



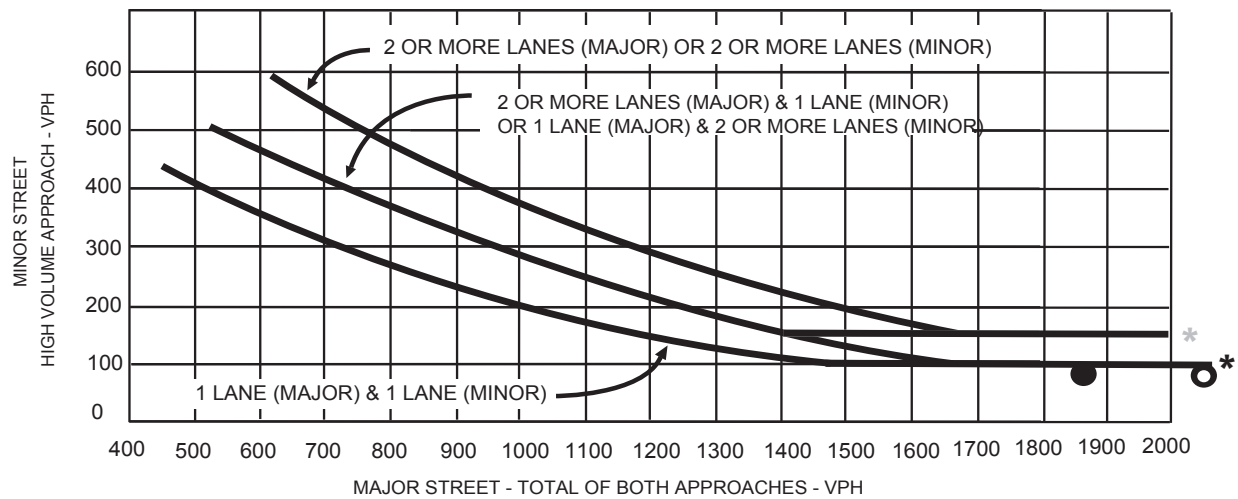
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**Appendix Figure 2**  
**Pratt Ave/Main St (SR29-128)**  
**2018 AM and PM With Project**  
**Signal Warrant #3**

## Pratt Avenue/Main St (SR29-128)

### PEAK HOUR VOLUME WARRANT #3

Urban Area



#### 2035 Weekday AM Peak Hour with Project

89 vehicles minor approach  
1873 vehicles major approaches

#### 2035 Weekday PM Peak Hour with Project

89 vehicles minor approach  
2099 vehicles major approaches

#### \* NOTE

150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE

Source: Year 2010 Manual on Uniform Traffic Control Devices, Federal Highway Administration



CRANE TRANSPORTATION GROUP

**Appendix Figure 3**  
**Pratt Ave/Main St (SR29-128)**  
**2035 AM and PM With Project**  
**Signal Warrant #3**



## **8 HOURS TRAFFIC COUNT DATA**

Comment 4: Heavy Trucks On Bank 2

| Start Time | Southbound |      |       |        | Westbound |      |       |        | Northbound |      |       |        | Eastbound |      |       |        |
|------------|------------|------|-------|--------|-----------|------|-------|--------|------------|------|-------|--------|-----------|------|-------|--------|
|            | LEFT       | THRU | RIGHT | UTURNS | LEFT      | THRU | RIGHT | UTURNS | LEFT       | THRU | RIGHT | UTURNS | LEFT      | THRU | RIGHT | UTURNS |
| 12:00 AM   |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 12:15 AM   |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 12:30 AM   |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 12:45 AM   |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 1:00 AM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 1:15 AM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 1:30 AM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 1:45 AM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 2:00 AM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 2:15 AM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 2:30 AM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 2:45 AM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 3:00 AM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 3:15 AM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 3:30 AM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 3:45 AM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 4:00 AM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 4:15 AM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 4:30 AM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 4:45 AM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 5:00 AM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 5:15 AM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 5:30 AM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 5:45 AM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 6:00 AM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 6:15 AM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 6:30 AM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 6:45 AM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 7:00 AM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 7:15 AM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 7:30 AM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 7:45 AM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 8:00 AM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 8:15 AM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 8:30 AM    | 2          | 119  | 0     | 0      | 4         | 1    | 8     | 1      | 0          | 133  | 6     | 0      | 0         | 1    | 0     | 0      |
| 8:45 AM    | 6          | 128  | 0     | 0      | 6         | 0    | 2     | 0      | 0          | 112  | 11    | 0      | 0         | 0    | 0     | 0      |
| 9:00 AM    | 3          | 115  | 0     | 0      | 8         | 0    | 6     | 0      | 1          | 119  | 6     | 0      | 0         | 1    | 0     | 0      |
| 9:15 AM    | 9          | 111  | 7     | 0      | 7         | 0    | 10    | 0      | 0          | 133  | 10    | 0      | 0         | 0    | 0     | 0      |
| 9:30 AM    | 8          | 123  | 0     | 0      | 5         | 0    | 12    | 0      | 2          | 135  | 6     | 0      | 0         | 0    | 1     | 0      |
| 9:45 AM    | 4          | 97   | 0     | 0      | 5         | 0    | 7     | 0      | 1          | 115  | 5     | 0      | 0         | 0    | 0     | 0      |
| 10:00 AM   | 3          | 120  | 0     | 0      | 8         | 0    | 10    | 0      | 0          | 122  | 9     | 0      | 0         | 1    | 0     | 0      |
| 10:15 AM   | 6          | 107  | 0     | 0      | 9         | 1    | 4     | 0      | 0          | 136  | 6     | 0      | 0         | 1    | 0     | 0      |
| 10:30 AM   | 2          | 142  | 0     | 0      | 7         | 0    | 4     | 0      | 1          | 124  | 12    | 0      | 0         | 0    | 2     | 0      |
| 10:45 AM   | 2          | 115  | 0     | 0      | 4         | 0    | 4     | 0      | 1          | 116  | 9     | 0      | 0         | 0    | 0     | 0      |
| 11:00 AM   | 1          | 102  | 1     | 0      | 6         | 0    | 4     | 0      | 2          | 119  | 6     | 0      | 0         | 0    | 0     | 0      |
| 11:15 AM   | 0          | 83   | 0     | 0      | 10        | 0    | 1     | 0      | 1          | 92   | 1     | 0      | 0         | 0    | 2     | 0      |
| 11:30 AM   | 10         | 91   | 0     | 0      | 7         | 0    | 4     | 0      | 1          | 109  | 6     | 0      | 0         | 0    | 0     | 0      |
| 11:45 AM   | 6          | 127  | 0     | 0      | 7         | 1    | 6     | 0      | 0          | 130  | 16    | 0      | 0         | 1    | 2     | 0      |
| 12:00 PM   | 8          | 122  | 0     | 0      | 12        | 0    | 4     | 0      | 3          | 117  | 15    | 1      | 0         | 0    | 2     | 0      |
| 12:15 PM   | 1          | 122  | 3     | 0      | 3         | 0    | 10    | 0      | 2          | 123  | 18    | 0      | 1         | 0    | 2     | 0      |
| 12:30 PM   | 7          | 102  | 0     | 0      | 10        | 0    | 14    | 0      | 1          | 111  | 10    | 0      | 0         | 0    | 0     | 0      |
| 12:45 PM   | 5          | 118  | 0     | 0      | 7         | 0    | 7     | 0      | 2          | 135  | 11    | 1      | 0         | 0    | 1     | 0      |
| 1:00 PM    | 3          | 121  | 0     | 0      | 11        | 0    | 4     | 0      | 0          | 139  | 8     | 0      | 0         | 1    | 1     | 0      |
| 1:15 PM    | 6          | 119  | 0     | 0      | 8         | 0    | 5     | 0      | 0          | 135  | 10    | 0      | 0         | 0    | 1     | 0      |
| 1:30 PM    | 12         | 140  | 1     | 0      | 10        | 0    | 7     | 0      | 0          | 143  | 7     | 0      | 0         | 0    | 0     | 0      |
| 1:45 PM    | 11         | 144  | 0     | 0      | 4         | 1    | 7     | 0      | 0          | 134  | 9     | 0      | 0         | 1    | 0     | 0      |
| 2:00 PM    | 6          | 100  | 0     | 0      | 12        | 0    | 8     | 0      | 1          | 142  | 7     | 0      | 2         | 0    | 0     | 0      |
| 2:15 PM    | 10         | 125  | 0     | 0      | 8         | 0    | 7     | 0      | 2          | 142  | 4     | 0      | 1         | 0    | 0     | 0      |
| 2:30 PM    | 8          | 129  | 0     | 0      | 8         | 0    | 6     | 0      | 0          | 152  | 10    | 0      | 0         | 0    | 0     | 0      |
| 2:45 PM    | 7          | 137  | 0     | 0      | 9         | 0    | 14    | 0      | 0          | 148  | 13    | 0      | 0         | 0    | 0     | 0      |
| 3:00 PM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 3:15 PM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 3:30 PM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 3:45 PM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 4:00 PM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 4:15 PM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 4:30 PM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 4:45 PM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 5:00 PM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 5:15 PM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 5:30 PM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 5:45 PM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 6:00 PM    | 3          | 123  | 0     | 0      | 6         | 0    | 4     | 0      | 0          | 145  | 4     | 0      | 0         | 1    | 0     | 0      |
| 6:15 PM    | 4          | 87   | 6     | 0      | 2         | 6    | 0     | 2      | 0          | 139  | 5     | 0      | 0         | 0    | 0     | 0      |
| 6:30 PM    | 4          | 89   | 0     | 0      | 2         | 0    | 3     | 0      | 0          | 127  | 6     | 0      | 0         | 0    | 0     | 0      |
| 6:45 PM    | 3          | 64   | 0     | 0      | 4         | 0    | 1     | 0      | 0          | 90   | 6     | 0      | 0         | 0    | 0     | 0      |
| 7:00 PM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 7:15 PM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 7:30 PM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 7:45 PM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 8:00 PM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 8:15 PM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 8:30 PM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 8:45 PM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 9:00 PM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 9:15 PM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 9:30 PM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 9:45 PM    |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 10:00 PM   |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 10:15 PM   |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 10:30 PM   |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 10:45 PM   |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 11:00 PM   |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 11:15 PM   |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 11:30 PM   |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
| 11:45 PM   |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |

|             | Southbound |       |       |        |           | Westbound |      |       |        |           | Northbound |       |       |        |           | Eastbound |       |       |        |           |        |             |
|-------------|------------|-------|-------|--------|-----------|-----------|------|-------|--------|-----------|------------|-------|-------|--------|-----------|-----------|-------|-------|--------|-----------|--------|-------------|
| START TIME  | LEFT       | THRU  | RIGHT | UTURNS | APP.TOTAL | LEFT      | THRU | RIGHT | UTURNS | APP.TOTAL | LEFT       | THRU  | RIGHT | UTURNS | APP.TOTAL | LEFT      | THRU  | RIGHT | UTURNS | APP.TOTAL | Total  | Utums Total |
| 7:00        | 3          | 96    | 0     | 0      | 99        | 1         | 1    | 6     | 0      | 8         | 3          | 70    | 6     | 0      | 79        | 2         | 2     | 1     | 0      | 5         | 191    | 0           |
| 7:15        | 4          | 104   | 0     | 0      | 108       | 3         | 1    | 2     | 0      | 6         | 1          | 90    | 3     | 0      | 94        | 0         | 0     | 0     | 0      | 0         | 208    | 0           |
| 7:30        | 6          | 120   | 0     | 0      | 126       | 8         | 0    | 7     | 0      | 15        | 0          | 93    | 6     | 0      | 99        | 0         | 0     | 0     | 0      | 0         | 240    | 0           |
| 7:45        | 5          | 122   | 1     | 0      | 128       | 1         | 0    | 5     | 0      | 6         | 1          | 87    | 7     | 0      | 95        | 2         | 1     | 0     | 0      | 3         | 232    | 0           |
| Total       | 18         | 442   | 1     | 0      | 461       | 13        | 2    | 20    | 0      | 35        | 5          | 340   | 22    | 0      | 367       | 4         | 3     | 1     | 0      | 8         | 871    | 0           |
| 8:00        | 8          | 135   | 0     | 0      | 143       | 8         | 0    | 3     | 0      | 11        | 1          | 90    | 9     | 0      | 100       | 1         | 0     | 0     | 0      | 1         | 255    | 0           |
| 8:15        | 1          | 133   | 0     | 0      | 134       | 6         | 1    | 10    | 0      | 17        | 0          | 90    | 5     | 0      | 95        | 0         | 0     | 1     | 0      | 1         | 247    | 0           |
| 8:30        | 6          | 130   | 0     | 0      | 136       | 12        | 0    | 10    | 0      | 22        | 1          | 98    | 10    | 0      | 109       | 2         | 0     | 0     | 0      | 2         | 269    | 0           |
| 8:45        | 5          | 174   | 0     | 0      | 179       | 10        | 0    | 4     | 0      | 14        | 2          | 102   | 5     | 0      | 109       | 1         | 0     | 1     | 0      | 2         | 304    | 0           |
| Total       | 20         | 572   | 0     | 0      | 592       | 36        | 1    | 27    | 0      | 64        | 4          | 380   | 29    | 0      | 413       | 4         | 0     | 2     | 0      | 6         | 1075   | 0           |
| 14:30       | 9          | 137   | 0     | 0      | 146       | 6         | 0    | 13    | 0      | 19        | 0          | 171   | 10    | 0      | 181       | 0         | 0     | 0     | 0      | 0         | 346    | 0           |
| 14:45       | 11         | 138   | 0     | 0      | 149       | 13        | 0    | 12    | 0      | 25        | 0          | 172   | 11    | 0      | 183       | 0         | 0     | 1     | 0      | 1         | 358    | 0           |
| 15:00       | 9          | 116   | 0     | 0      | 125       | 11        | 0    | 17    | 0      | 28        | 0          | 164   | 14    | 0      | 178       | 0         | 1     | 0     | 0      | 1         | 332    | 0           |
| 15:15       | 10         | 125   | 1     | 0      | 136       | 5         | 2    | 18    | 0      | 25        | 1          | 183   | 18    | 0      | 202       | 0         | 1     | 0     | 0      | 1         | 364    | 0           |
| Total       | 39         | 516   | 1     | 0      | 556       | 35        | 2    | 60    | 0      | 97        | 1          | 690   | 53    | 0      | 744       | 0         | 2     | 1     | 0      | 3         | 1400   | 0           |
| 15:30       | 14         | 95    | 0     | 0      | 109       | 4         | 0    | 10    | 0      | 14        | 1          | 194   | 17    | 0      | 212       | 0         | 3     | 0     | 0      | 3         | 338    | 0           |
| 15:45       | 7          | 113   | 1     | 0      | 121       | 5         | 0    | 19    | 0      | 24        | 0          | 183   | 22    | 0      | 205       | 0         | 0     | 0     | 0      | 0         | 350    | 0           |
| 16:00       | 13         | 106   | 0     | 0      | 119       | 8         | 1    | 14    | 0      | 23        | 0          | 200   | 16    | 0      | 216       | 0         | 0     | 1     | 0      | 1         | 359    | 0           |
| 16:15       | 8          | 136   | 0     | 0      | 144       | 9         | 0    | 24    | 0      | 33        | 0          | 217   | 11    | 0      | 228       | 0         | 0     | 1     | 0      | 1         | 406    | 0           |
| Total       | 42         | 450   | 1     | 0      | 493       | 26        | 1    | 67    | 0      | 94        | 1          | 794   | 66    | 0      | 861       | 0         | 3     | 2     | 0      | 5         | 1453   | 0           |
| 16:30       | 9          | 128   | 0     | 0      | 137       | 6         | 0    | 12    | 0      | 18        | 0          | 157   | 11    | 0      | 168       | 0         | 0     | 0     | 0      | 0         | 323    | 0           |
| 16:45       | 6          | 143   | 0     | 0      | 149       | 8         | 0    | 2     | 0      | 10        | 0          | 174   | 10    | 0      | 184       | 0         | 1     | 0     | 0      | 1         | 344    | 0           |
| 17:00       | 5          | 141   | 0     | 0      | 146       | 5         | 0    | 4     | 0      | 9         | 0          | 216   | 19    | 0      | 235       | 0         | 0     | 0     | 0      | 0         | 390    | 0           |
| 17:15       | 10         | 106   | 0     | 0      | 116       | 9         | 0    | 5     | 0      | 14        | 2          | 183   | 9     | 0      | 194       | 0         | 0     | 0     | 0      | 0         | 324    | 0           |
| Total       | 30         | 518   | 0     | 0      | 548       | 28        | 0    | 23    | 0      | 51        | 2          | 730   | 49    | 0      | 781       | 0         | 1     | 0     | 0      | 1         | 1381   | 0           |
| 17:30       | 2          | 106   | 0     | 0      | 108       | 7         | 0    | 10    | 0      | 17        | 0          | 177   | 18    | 0      | 195       | 0         | 0     | 0     | 0      | 0         | 320    | 0           |
| 17:45       | 4          | 107   | 0     | 1      | 112       | 6         | 0    | 4     | 1      | 11        | 0          | 171   | 4     | 0      | 175       | 0         | 0     | 0     | 0      | 0         | 298    | 2           |
| 18:00       | 0          | 0     | 0     | 0      | 0         | 0         | 0    | 0     | 0      | 0         | 0          | 0     | 0     | 0      | 0         | 0         | 0     | 0     | 0      | 0         | 0      | 0           |
| 18:15       | 0          | 0     | 0     | 0      | 0         | 0         | 0    | 0     | 0      | 0         | 0          | 0     | 0     | 0      | 0         | 0         | 0     | 0     | 0      | 0         | 0      | 0           |
| Total       | 6          | 213   | 0     | 1      | 220       | 13        | 0    | 14    | 1      | 28        | 0          | 348   | 22    | 0      | 370       | 0         | 0     | 0     | 0      | 0         | 618    | 2           |
| Grand Total | 155        | 2711  | 3     | 1      | 2870      | 151       | 6    | 211   | 1      | 369       | 13         | 3282  | 241   | 0      | 3536      | 8         | 9     | 6     | 0      | 23        | 6798   | 2           |
| Apprch %    | 5.4%       | 94.5% | 0.1%  | 0.0%   |           | 40.9%     | 1.6% | 57.2% | 0.3%   |           | 0.4%       | 92.8% | 6.8%  | 0.0%   |           | 34.8%     | 39.1% | 26.1% | 0.0%   |           |        |             |
| Total %     | 2.3%       | 39.9% | 0.0%  | 0.0%   | 42.2%     | 2.2%      | 0.1% | 3.1%  | 0.0%   | 5.4%      | 0.2%       | 48.3% | 3.5%  | 0.0%   | 52.0%     | 0.1%      | 0.1%  | 0.1%  | 0.0%   | 0.3%      | 100.0% |             |

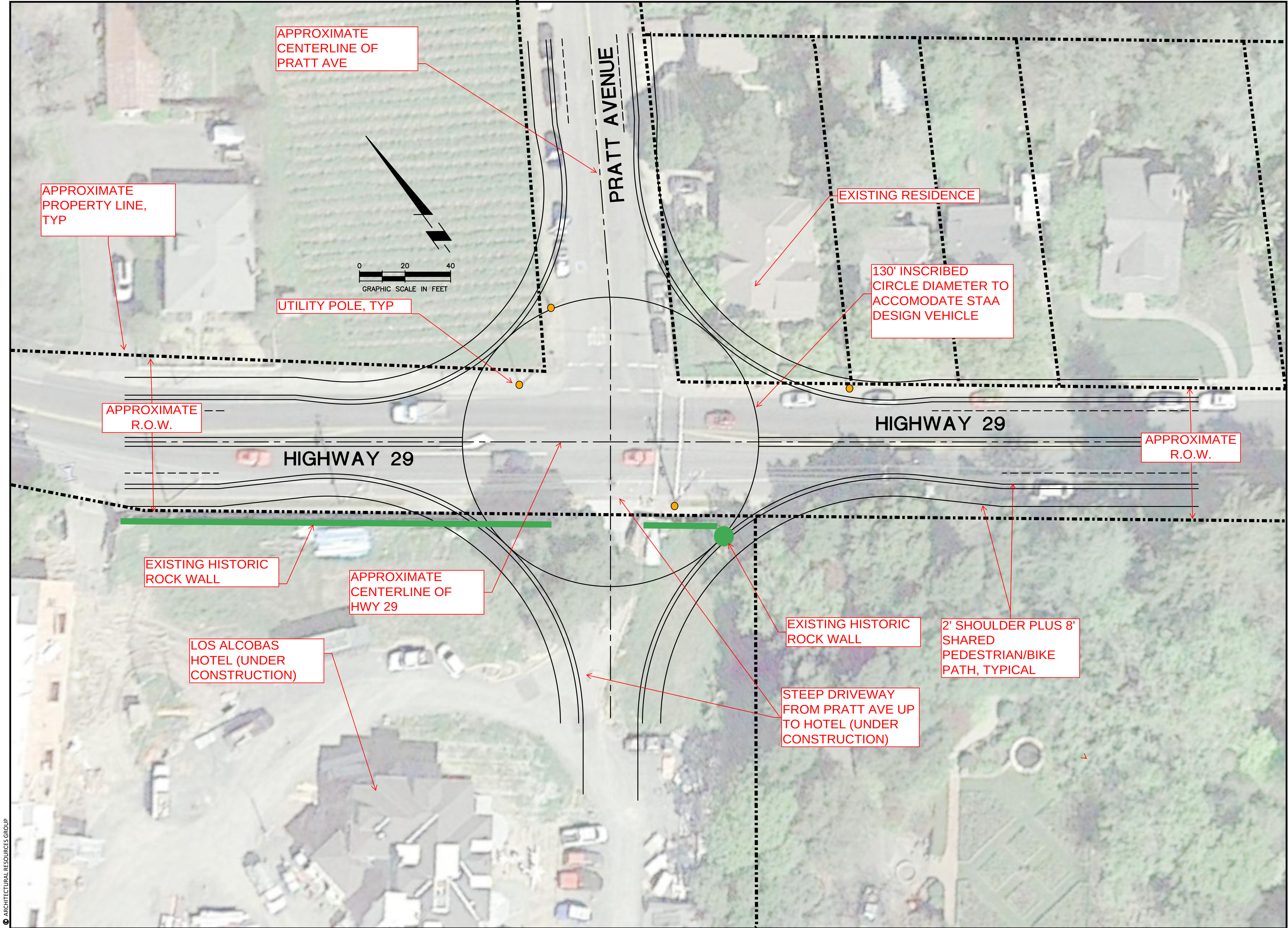
| AM PEAK HOUR                                      | Southbound |       |       |        |           | Westbound |      |       |        |           | Northbound |       |       |        |           | Eastbound |      |       |        |           |       |  |
|---------------------------------------------------|------------|-------|-------|--------|-----------|-----------|------|-------|--------|-----------|------------|-------|-------|--------|-----------|-----------|------|-------|--------|-----------|-------|--|
| START TIME                                        | LEFT       | THRU  | RIGHT | UTURNS | APP.TOTAL | LEFT      | THRU | RIGHT | UTURNS | APP.TOTAL | LEFT       | THRU  | RIGHT | UTURNS | APP.TOTAL | LEFT      | THRU | RIGHT | UTURNS | APP.TOTAL | Total |  |
| Peak Hour Analysis From 08:00 to 09:00            |            |       |       |        |           |           |      |       |        |           |            |       |       |        |           |           |      |       |        |           |       |  |
| Peak Hour For Entire Intersection Begins at 08:00 |            |       |       |        |           |           |      |       |        |           |            |       |       |        |           |           |      |       |        |           |       |  |
| 8:00                                              | 8          | 135   | 0     | 0      | 143       | 8         | 0    | 3     | 0      | 11        | 1          | 90    | 9     | 0      | 100       | 1         | 0    | 0     | 0      | 1         | 255   |  |
| 8:15                                              | 1          | 133   | 0     | 0      | 134       | 6         | 1    | 10    | 0      | 17        | 0          | 90    | 5     | 0      | 95        | 0         | 0    | 1     | 0      | 1         | 247   |  |
| 8:30                                              | 6          | 130   | 0     | 0      | 136       | 12        | 0    | 10    | 0      | 22        | 1          | 98    | 10    | 0      | 109       | 2         | 0    | 0     | 0      | 2         | 269   |  |
| 8:45                                              | 5          | 174   | 0     | 0      | 179       | 10        | 0    | 4     | 0      | 14        | 2          | 102   | 5     | 0      | 109       | 1         | 0    | 1     | 0      | 2         | 304   |  |
| Total Volume                                      | 20         | 572   | 0     | 0      | 592       | 36        | 1    | 27    | 0      | 64        | 4          | 380   | 29    | 0      | 413       | 4         | 0    | 2     | 0      | 6         | 1075  |  |
| % App Total                                       | 3.4%       | 96.6% | 0.0%  | 0.0%   |           | 56.3%     | 1.6% | 42.2% | 0.0%   |           | 1.0%       | 92.0% | 7.0%  | 0.0%   |           | 66.7%     | 0.0% | 33.3% | 0.0%   |           |       |  |
| PHF                                               | .625       | .822  | .000  | .000   | .827      | .750      | .250 | .675  | .000   | .727      | .500       | .931  | .725  | .000   | .947      | .500      | .000 | .500  | .000   | .750      | .884  |  |

## **ACCIDENT DATA**

St. Helena Police Department  
Collision Data  
Main St/Pratt Ave

| Case #  | Date       | Time Location         | # of V's involved | Damage                      | Minor Injuries | Major Injuries | Fatal Injuries | DUI Involved | Type of Collision | PCF      | Details                                                                            |
|---------|------------|-----------------------|-------------------|-----------------------------|----------------|----------------|----------------|--------------|-------------------|----------|------------------------------------------------------------------------------------|
| 12-0771 | 10/14/2012 | 1024 MAIN ST/PRATT AV | 2                 | 2 - Major                   | 0              | 0              | 0              | F            | Broadside         | 22107    | U-turn                                                                             |
| 13-0394 | 06/06/2013 | 1640 MAIN ST/PRATT AV | 2                 | 1 - Moderate, 1 - Mod/Major | 0              | 0              | 0              | F            | Broadside         | 22106    | Attempting u-turn after realizing they passed Beringer and pulled over             |
| 13-0482 | 07/10/2013 | 615 MAIN ST/PRATT AV  | 1                 | 1 - Major                   | 0              | 0              | 0              | F            | Hit object        | 22107    | Distracted by child in V, drifted to right into a tree at beginning of tree tunnel |
| 14-0106 | 02/20/2014 | 904 MAIN ST/PRATT AV  | 2                 | 2 - Moderate                | 0              | 0              | 0              | F            | Side Swipe        | 22107    | V N/B Main turned onto E/B Pratt, sideswipped V waiting on Pratt                   |
| 14-0512 | 08/07/2014 | 758 MAIN ST/PRATT AV  | 2                 | 1 - Moderate, 1 Major       | 0              | 0              | 0              | F            | Broadside         | 21802(a) | V W/B Pratt turning N/B Main, view blocked by hedge, pulled out when unsafe        |
| 15-0497 | 08/11/2015 | 1236 MAIN ST/PRATT AV | 2                 | 2 - Minor                   | 0              | 0              | 0              | F            | Side Swipe        | 21750(a) | Attempted to pass illegally and clipped front corner of vehicle                    |
| 11-0873 | 10/21/11   | 1818 MAIN ST/PRATT AV | 2                 | Unknown                     | 0              | 0              | 0              | F            | Unknown           | Unknown  | Record Purged                                                                      |
| 11-0982 | 12/2/11    | 1449 MAIN ST/PRATT AV | 3                 | Unknown                     | 0              | 0              | 0              | F            | Unknown           | Unknown  | Record Purged                                                                      |
| 11-0983 | 12/2/11    | 1524 MAIN ST/PRATT AV | 2                 | Unknown                     | 0              | 0              | 0              | F            | Unknown           | Unknown  | Record Purged                                                                      |





24"x36" OR 22"x34" SHEET SIZE. IF SHEET IS SMALLER, THEN DRAWING HAS BEEN REDUCED.



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| NO.       | DESCRIPTION | DATE |
|-----------|-------------|------|
| REVISIONS |             |      |

## THE CULINARY INSTITUTE OF AMERICA

AT PRATT AVENUE  
830 PRATT AVENUE  
ST. HELENA, CALIFORNIA

SHEET TITLE  
**ROUNDAOUT**

PROJ NO.  
11208.03

DRAWN  
JA

CHECKED  
JLG

DRAWING NO.

**EXHIBITA**



**Appendix Table A**  
**CULINARY INSTITUTE OF AMERICA - GREYSTONE**  
**EXISTING WEEKDAY TRIP GENERATION AT CIA CAMPUS (EDUCATION & TOURIST PEAK SEASON)**  
**(WITHOUT MASTER PLAN PROJECT) 6:00 AM to 3:00 PM; “With Master Plan Project” reductions are shown in bold text**

|                                        | 6:00-7:00<br>AM |     | 7:00-8:00<br>AM |     | 8:00 – 9 :00<br>AM    |                    | 9:00 – 10:00<br>AM |     | 10:00 – 11:00<br>AM |     | 11:00 AM-<br>12:00 NOON |     | 12:00 – 1:00<br>PM |     | 1:00 – 2:00<br>PM |     | 2:00 – 3:00<br>PM |     |
|----------------------------------------|-----------------|-----|-----------------|-----|-----------------------|--------------------|--------------------|-----|---------------------|-----|-------------------------|-----|--------------------|-----|-------------------|-----|-------------------|-----|
|                                        | IN              | OUT | IN              | OUT | IN                    | OUT                | IN                 | OUT | IN                  | OUT | IN                      | OUT | IN                 | OUT | IN                | OUT | IN                | OUT |
| Admin Staff                            |                 |     | 5               |     | 5<br><b>-5 (4)</b>    |                    |                    |     |                     |     |                         |     | 2                  | 2   |                   |     |                   |     |
| Education Staff                        | 15              |     |                 |     |                       |                    |                    |     |                     |     |                         |     |                    |     | 15                | 15  |                   |     |
| SIG Program &<br>Purchasing staff      | 2               |     |                 |     | 21<br><b>-16 (4)</b>  | 3<br><b>-3 (4)</b> |                    |     |                     |     |                         |     | 5                  | 5   |                   |     |                   |     |
| Pub Ops/SE                             |                 |     |                 |     | 8                     |                    |                    |     |                     |     |                         |     | 1                  | 1   |                   |     |                   |     |
| Campus Store &<br>Café Staff           |                 |     |                 |     | 7                     |                    |                    |     |                     |     |                         |     | 1                  | 1   |                   |     |                   |     |
| Restaurant Staff<br>Shift 1<br>Shift 2 |                 |     |                 |     | 10                    |                    |                    |     |                     |     |                         |     |                    |     |                   |     |                   |     |
| Teachers                               | 28              |     |                 |     |                       |                    |                    |     |                     |     |                         |     |                    |     | 28                | 28  |                   |     |
| AOS Students                           |                 |     | 53              |     |                       |                    |                    |     |                     |     | 3                       | 3   |                    |     |                   | 53  | 41                |     |
| Continuing Ed & Food<br>Enthusiast     |                 |     | 28              |     |                       |                    |                    |     |                     |     |                         |     |                    |     | 28                | 28  |                   |     |
| Restaurant Patrons (3)                 |                 |     |                 |     |                       |                    |                    |     |                     |     | 35                      |     | 5                  | 5   | 5                 | 5   | 5                 | 5   |
| Tourists                               |                 |     |                 |     |                       |                    | 10                 |     | 5                   | 5   | 8                       | 3   | 3                  | 3   | 2                 | 2   | 3                 | 3   |
| De Baun Theater                        |                 |     |                 |     |                       |                    |                    |     |                     |     |                         |     | 5                  |     |                   |     |                   |     |
| Maintenance, Repair and<br>Janitorial  | 15              |     |                 |     |                       |                    |                    |     |                     |     |                         |     |                    |     |                   |     | 15                | 15  |
| Trades People/<br>Sales People         |                 |     |                 |     | 1                     |                    | 1                  | 1   | 1                   | 2   |                         |     |                    |     | 1                 |     | 1                 | 1   |
| Shuttles                               | 4               | 4   | 4               | 4   | 4                     | 4                  | 4                  | 4   | 4                   | 4   | 4                       | 4   | 4                  | 4   | 4                 | 4   | 4                 | 4   |
| Deliveries                             |                 |     |                 |     | 1                     |                    | 2                  | 1   | 2                   | 1   |                         |     |                    |     | 2                 |     | 2                 | 1   |
| TOTAL                                  | 64              | 4   | 90              | 4   | 57<br><b>- 21 (4)</b> | 7<br><b>-3 (4)</b> | 17                 | 6   | 12                  | 12  | 50                      | 10  | 26                 | 21  | 85                | 135 | 71                | 29  |

(1) 45 students now staying in dorms on CIA campus; 70% of these students have cars. Also project that 85% of students living off-site, and not at Vineyard Lodge housing, drive to/from campus on a 70/30 split AM/PM.

(2) 42 @ 1.5 per car.

(3) 70 patrons @ 2.0 per car

(4) “With Project” reductions 7:45 – 8:45 AM: 21 inbound, 3 outbound

Source: Crane Transportation Group based upon input from Culinary Institute of America



**Appendix Table B**  
**CULINARY INSTITUTE OF AMERICA - GREYSTONE**  
**EXISTING WEEKDAY TRIP GENERATION AT CIA CAMPUS (EDUCATION & TOURIST PEAK SEASON)**  
**(WITHOUT MASTER PLAN PROJECT) 3:00 PM to 12:00 MIDNIGHT; “With Master Plan Project” reductions are shown in bold text**

|                                        | 3:00-4:00 PM |     | 4:00-5:00 PM         |                      | 5:00 – 6:-00 PM |     | 6:00 – 7:00 PM |     | 7:00 – 8:00 PM |     | 8:00-9:00 PM |     | 9:00 – 10:00 |     | 10:00 –11:00 |     | 11:00 – 12:00 MIDNIGHT |     |
|----------------------------------------|--------------|-----|----------------------|----------------------|-----------------|-----|----------------|-----|----------------|-----|--------------|-----|--------------|-----|--------------|-----|------------------------|-----|
|                                        | IN           | OUT | IN                   | OUT                  | IN              | OUT | IN             | OUT | IN             | OUT | IN           | OUT | IN           | OUT | IN           | OUT | IN                     | OUT |
| Admin Staff                            |              |     |                      | 10<br><b>-5 (4)</b>  |                 | 5   |                |     |                |     |              |     |              |     |              |     |                        |     |
| Education Staff                        |              |     |                      |                      |                 |     |                |     |                |     |              | 15  |              |     |              |     |                        |     |
| SIG Program & Purchasing staff         |              |     |                      | 20<br><b>-15 (4)</b> |                 |     |                |     |                |     |              |     |              |     |              |     |                        |     |
| Pub Ops/SE                             |              |     |                      |                      |                 |     |                | 8   |                |     |              |     |              |     |              |     |                        |     |
| Campus Store & Café Staff              |              |     |                      |                      |                 |     |                | 7   |                |     |              |     |              |     |              |     |                        |     |
| Restaurant Staff<br>Shift 1<br>Shift 2 | 10           |     |                      |                      |                 |     |                | 10  |                |     |              |     |              |     |              |     |                        | 10  |
| Teachers                               |              |     |                      | 2                    | 2               |     |                |     |                |     |              | 28  |              |     |              |     |                        |     |
| AOS Students                           |              |     |                      | 2                    | 2               |     |                |     |                |     |              | 41  |              |     |              |     |                        |     |
| Continuing Ed & Food Enthusiast        |              |     | 1<br><b>-1 (4)</b>   | 1                    |                 |     |                |     |                |     |              | 28  |              |     |              |     |                        |     |
| Restaurant Patrons (3)                 | 5            | 5   | 4<br><b>-1 (4)</b>   | 4                    | 4               | 4   | 15             | 15  | 15             | 15  | 10           | 10  |              | 25  |              | 10  |                        |     |
| Tourists                               | 10           | 10  | 15<br><b>-5 (4)</b>  | 15<br><b>-5 (4)</b>  |                 | 10  |                | 5   |                |     |              |     |              |     |              |     |                        |     |
| De Baun Theater                        |              |     |                      | 5                    |                 |     |                |     |                |     |              |     |              |     |              |     |                        |     |
| Maintenance, Repair and Janitorial     |              |     | 2                    | 2                    |                 |     |                |     |                | 5   |              |     |              | 10  |              |     |                        |     |
| Trades People/<br>Sales People         | 1            | 1   |                      | 2                    |                 |     |                |     |                |     |              |     |              |     |              |     |                        |     |
| Shuttles                               | 4            | 4   | 4                    | 4                    | 4               | 4   | 4              | 4   | 4              | 4   | 4            | 4   | 4            | 4   |              |     |                        |     |
| Deliveries                             |              | 1   | 3<br><b>-3 (4)</b>   | 5                    |                 | 3   |                |     |                |     |              |     |              |     |              |     |                        |     |
| TOTAL                                  | 29           | 21  | 29<br><b>-10 (4)</b> | 72<br><b>-25 (4)</b> | 12              | 21  | 19             | 49  | 19             | 24  | 14           | 111 | 4            | 39  |              | 10  |                        | 10  |

(1) 45 students now staying in dorms on CIA campus, assume 70% of these students have cars. Also project that 85% of students living off-site, and not at Vineyard Lodge housing, drive to/from campus on a 70/30 split AM/PM.

(2) 42 @ 1.5 per car.

(3) 70 patrons @ 2.0 per car

(4) “With Project” reductions 4:00 – 5:00 PM: 10 inbound, 25 outbound

Source: Crane Transportation Group based upon input from Culinary Institute of America



**TRAFFIC IMPACT REPORT  
CULINARY INSTITUTE OF AMERICA  
VINEYARD LODGE MASTER PLAN**

**November 2, 2016**

**Prepared for: Culinary Institute of America**

**Prepared by: CRANE TRANSPORTATION GROUP  
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# CRANE TRANSPORTATION GROUP CULINARY INSTITUTE OF AMERICA MASTER PLAN TRAFFIC AND PARKING EVALUATION VINEYARD LODGE HOUSING ON PRATT AVENUE

## I. INTRODUCTION

This report has been prepared to address the changes to traffic and parking resulting from the proposed remodel and expansion of the Vineyard Lodge housing on Pratt Avenue in St. Helena. The housing is occupied exclusively by CIA-Greystone students. Resident students are not allowed to park at Greystone; they must utilize the existing CIA shuttle service, bike or walk to and from the Lodge and the Greystone facility. As part of its Master Plan, the CIA will utilize a larger bus than it uses today (32 seats) as well as its two other shuttles currently in use (22 & 14 seats, respectively,) to transport students between Vineyard Lodge and Greystone, thereby maintaining the same number of daily, all-day shuttle trips that occur today (i.e., pick-ups/drop-offs every 15 minutes). The CIA would make rental cars available to students for transport needs not otherwise served by shuttles. The Master Plan would move much of the restaurant service and several other functions to the former Copia site in Napa where a new CIA facility is in the planning stages. The new CIA-Copia facility will allow larger conferences and public events that create the greatest traffic and parking demand at Greystone to be relocated. The Master Plan includes expanding and improving classroom space at Greystone to accommodate 100 additional students; all will be housed at the Vineyard Lodge.

The Vineyard Lodge remodel and expansion will consist of the following:

- Demolition of the 15,862 square feet of the existing Vineyard Lodge 1 dormitory (former Marlinda facility). It will be replaced by the construction of three new lodges.
- The three lodges will contain 164 new beds primarily in single rooms, with a few double units. Combined with the 60 beds in the existing Vineyard Lodge 2, there will be a maximum occupancy of 224 residents on-site. The on-site parking will total 72 spaces.

Traffic counts were conducted by Crane Transportation Group at the Vineyard Lodge driveway on Thursday, May 12, 2016, concurrent with Vineyard Lodge parking lot counts. Counts were also underway on the same day at the nearest major intersection, Pratt Avenue/S.R. 29.

The following analysis focuses on weekday traffic at the Pratt Avenue/S.R. 29 intersection and parking demand at Vineyard Lodge.

2016 volumes have been seasonally adjusted consistent with Caltrans' PeMS (Performance Measurement System) peak season data for S.R. 29 to represent peak season conditions. The proposed CIA Master Plan is projected for completion and full operation in year 2018. For the Vineyard Lodge site, the plan includes:

- expansion of the Lodge from 101 beds to 224 beds, with 72 parking spaces.
- limit parking permits to 31% of Vineyard Lodge residents (69 permits), with the remaining three spaces to be utilized for "shared" rental cars. Creation of one-way circulation via a new driveway

- with a one-way entrance and one-way exit onto Pratt Avenue.
- relocation of many existing activities from Greystone to the former Copia site in the City of Napa to make room for expanded and improved classroom space at Greystone, and expand the public accessibility of the CIA presence in the Napa Valley, through development of the former Copia site.
- Continued CIA-provision of “shared” rental cars for students when needed.

Initially, the expected growth in existing (non-project) traffic along S.R.29 was projected in order to develop year 2018 peak season traffic conditions. Year 2035 volumes were taken from the modeling output from the ongoing St. Helena General Plan update. Trip generation and distribution projections were then developed for the very slight increase in traffic traveling to and from the Vineyard Lodge site, along with an overall decrease in traffic to and from the Greystone site due to the move to Napa of many of the CIA-Greystone functions.

## II. SUMMARY OF FINDINGS

1. The CIA Vineyard Lodge Master Plan is a part of a larger Master Plan to relocate CIA facilities at Greystone in St. Helena, to a new facility at the former Copia site in Napa, then improve classroom space at Greystone to serve an additional 100 students. It proposes to add housing for an additional 123 students at its Vineyard Lodge site. Between existing housing at Greystone and the new housing at Vineyard Lodge, the CIA will have housing for 271 of its total 300 students. Students residing at Vineyard Lodge will continue to use daily shuttles to go to and from the Vineyard Lodge housing and the Greystone campus, and other transportation support will be provided for students as needed. Parking permits will strictly limit the total number of student vehicles at Vineyard Lodge.
2. Existing “Without Project” Conditions: During the existing peak traffic hour on a summer/fall 2016 weekday, with 2016 (without project) volumes, the Pratt Avenue/S.R. 29-128 (Main Street) intersection would experience AM peak hour LOS D operation, with 30.3 seconds average delay for turns from westbound Pratt Avenue and PM peak hour LOS E operation, with 39.3 seconds average delay for turns from westbound Pratt Avenue.
3. Year 2018 “Without Project” Conditions: During the peak traffic hour on a summer/fall 2018 weekday, with 2018 (without project) volumes, the Pratt Avenue/Las Alcobas Hotel Driveway/S.R. 29-128 (Main Street) intersection would experience AM peak hour LOS E operation, with about 35.9 seconds average delay for turns from the eastbound Las Alcobas Hotel Driveway, and LOS F operation, with 64.0 seconds average delay for turns from westbound Pratt Avenue. PM peak hour would experience LOS E operation, with 36.4 seconds average delay for turns from the eastbound Las Alcobas Hotel Driveway, and LOS F operation, with 93.4 seconds average delay for turns from westbound Pratt Avenue.
4. Year 2035 “Without Project” Conditions: During the peak traffic hour on a summer/fall 2035 weekday, with 2035 (without project) volumes, the Pratt Avenue/Las Alcobas Hotel Driveway/S.R. 29-128 (Main Street) intersection would experience AM peak hour LOS F



operation, with 87.1 seconds average delay for turns from the eastbound Las Alcobas Hotel Driveway, and LOS F operation, with extreme delay (over 120 seconds average delay) for turns from westbound Pratt Avenue. PM peak hour would experience LOS F operation, with about 92.1 seconds average delay for turns from the eastbound Las Alcobas Hotel Driveway, and LOS F operation, with extreme delay (over 120 seconds average delay) for turns from westbound Pratt Avenue.

5. Volumes at the Pratt Avenue/ SR 29-128 intersection would not meet the 8-hour urban warrant, or urban peak hour warrant #3 criteria for signalization during either of the weekday peak traffic hours for 2018 or 2035 without Master Plan conditions, however, by 2035, volumes approach meeting both signal warrants #1 and #3 criteria. Please see the warrant tables and charts in the **Appendix. Table 3** provides results for signalized operation, with LOS A, B or C for all conditions. Warrant, #7, the signal warrant pertaining to accident data, is not met for the five years of reported crash data at the intersection. A roundabout is not considered feasible at this intersection due to space constraints, as detailed in a memorandum prepared by Summit Engineering (10/21/16) showing the layout of a 150-foot roundabout diameter overlay of the intersection. The memorandum is included in the appendix to this study.
6. The civil engineer for the Las Alcobas Hotel, Riechers Spence Associates, prepared a design<sup>1</sup> for the Pratt Avenue/ Las Alcobas Hotel Driveway/SR 29-128 intersection northbound left turn lane with a length of 150 feet. This length would be more than adequate to accommodate the projected maximum storage demand.
7. Existing “With Project” Conditions: The Pratt Avenue/S.R. 29-128 intersection would experience AM peak hour LOS D operation, with 30.5 seconds average delay for westbound Pratt Avenue (an increase in average delay of 0.2 second), and LOS E operation, with 39.6 seconds average delay during the PM peak hour for turns on the westbound Pratt Avenue approach (an increase in average delay of 0.3 second). The project increment of 4 outbound trips from Vineyard Lodge would add about 6 percent additional traffic to the westbound intersection approach during the existing AM and PM peak hours, adding to the existing lengthy delays.
8. Year 2018 “With Project” Conditions: During the peak traffic hour on a summer/fall weekday morning and afternoon, with 2018 (with Master Plan, i.e., “with project”) volumes, the Pratt Avenue/Las Alcobas Hotel Driveway/S.R. 29-128 intersection would experience AM peak hour LOS E operation, with 35.1 seconds average delay for westbound Pratt Avenue (a decrease in average delay of 0.8 second), and LOS F operation, with 64.9 seconds average delay during the PM peak hour for turns on the Las Alcobas Hotel Driveway approach (an increase in average delay of 0.9 second). The intersection would experience PM peak hour LOS E operation with 35.4 seconds average average delay (an increase in average delay of 1 second). Westbound Pratt Avenue turns would experience extreme delays (LOS F) without the Master Plan project during the AM and PM peak hours; the project increment of 4 trips would add to the existing lengthy delays; it would add 5.5 percent additional traffic to the westbound intersection approach during the AM and PM peak hours. .

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<sup>1</sup> January 6, 2015.

9. Year 2035 “With Project” Conditions: With 2035 (with Master Plan) volumes, the Pratt Avenue/Las Alcobas Hotel Driveway/S.R. 29-128 intersection would experience AM peak hour LOS F operation, with 83.6 seconds average delay for turns from the Las Alcobas Hotel Driveway approach (a decrease in average delay of 3.5 seconds), and PM peak hour LOS F operation, with 88.3 seconds average delay for turns from the Las Alcobas Hotel Driveway approach (a decrease in average delay of 3.8 seconds). Westbound Pratt Avenue turns would experience extreme delays (LOS F with over 120 second delays) without the Master Plan project during the AM and PM peak hours; the project increment of 4 trips would add to the existing extreme delays, and would add 5 percent additional traffic to the westbound intersection approach during the AM and PM peak hours.
10. Volumes at the Pratt Avenue/ SR 29-128 intersection would not meet the 8-hour urban warrant, or urban peak hour warrant #3 criteria for signalization during either of the weekday peak traffic hours for 2018 or 2035 with Master Plan conditions. However, as with 2035 without Master Plan conditions, volumes approach meeting both signal warrants #1 and #3. Please see the warrant tables and charts in the **Appendix. Table 3** provides results for signalized operation, with LOS A, B or C for all conditions. Warrant, #7, the accident warrant, is not met for the five years of reported crash data at the intersection. A roundabout is not considered feasible at this intersection due to space constraints, as detailed in a memorandum prepared by Summit Engineering (10/21/16) showing the layout of a 150-foot roundabout diameter overlay of the intersection. The memorandum is included in the appendix to this study.
11. Sight lines would be acceptable for drivers turning from the project driveway to Pratt Avenue, based upon the criteria provided in the Caltrans March 2014 *Highway Design Manual*. Sight lines to the east and west would extend over 500 feet. Based upon travel speeds of 30 miles per hour at the site for vehicles traveling east and west on Pratt Avenue, the required stopping sight distance would be 200 feet. At higher speeds, such as 45 or 50 miles per hour, the required stopping sight distance would be up to 430 feet (for a 50 mph speed). Therefore, sight lines would be acceptable assuming that no landscaping is planted along the site frontage that would ultimately grow and block driver views.
12. City parking code for dormitory facilities is two spaces for the “resident owner” and one space for each guest room (interpreted here as “each bed”). This would result in a requirement of 226 parking spaces, or 154 spaces more than planned for the new facility. The proposal of 72 parking spaces for a 224-bed dormitory would result in a ratio of 0.32 spaces per bed, more equivalent to a ratio used for senior assisted living housing than for student dorms. However, the CIA-operated facility functions very much like an assisted living facility, as almost all transport is controlled by the facility management on an all-day basis. Unlike assisted living facilities, rules are enforced for residents strictly limiting vehicle parking permits, and providing shared cars plus rental car options by the facility management (CIA). The CIA has a record of effective management of this lodging facility extending for over twelve years, thus, the 72-space parking total will be enforced

to ensure that student parking space demand does not exceed available supply. Parking enforcement will be required (parking permits will need to be displayed and monitored whenever the Lodge is at or near capacity). At maximum occupancy the facility will have no capacity for visitor parking.

13. The project would not result in significant impacts to traffic and transportation as evaluated per the City's significance criteria (listed in Section IV.D). The project would not have significant impacts as defined by the City of St. Helena's transportation impact criteria. Due to the project's reduction of through traffic on SR 29-128 (Main Street) and minor increase of traffic on the Pratt Avenue westbound approach to Main Street, "with project" conditions result in a reduced overall traffic volume at the Pratt Avenue/S.R. 29-128 intersection. Project volumes would not result in a "letter" change in intersection Level of Service operation, and would result in minor increased delay due to 4 additional westbound trips, 3 of which would be added to westbound Pratt Avenue left turns during the AM and PM peak hours – adding to the existing extreme delays on the westbound Pratt Avenue approach. Project traffic would not result in signal warrant #1 or #3 being met.

### III. PROPOSED PROJECT

The Culinary Institute of America at Greystone (the "CIA") currently has an enrollment of close to 200 students at its 2555 Main Street property. The CIA currently has housing for 47 students in dormitories on its Main Street site and 101 students on its Vineyard Lodge property at 830 Pratt Avenue. The CIA recently purchased the American Center for Wine Food & the Arts ("Copia") in the City of Napa. The acquisition of Copia will allow the CIA to reduce activities at its Greystone campus by relocating employees, programs, and event activities to Copia. As a result, the CIA proposes a new master plan for its Greystone campus in which it will renovate portions of the Greystone interior to provide additional and more efficient educational facilities. As part of the Master Plan the CIA proposes expanding student enrollment by 100 students to 300. At the same time it proposes to add housing for an additional 123 students at its Vineyard Lodge site. Between existing housing at Greystone and the new housing at Vineyard Lodge, the CIA will have housing for 271 of its 300 students. Students residing at Vineyard Lodge will continue to use daily shuttles to go to and from the Vineyard Lodge housing and the Greystone campus.

The proposed CIA Master Plan is projected for completion and full operation in year 2018. The plan includes:

- expansion of the Associate in Occupational Studies in Culinary Arts (AOS) degree program from 200 to 300 students
- expansion of Vineyard Lodge from 101 beds to 224 beds, with 72 parking spaces.
- limit parking permits to 31% of Vineyard Lodge residents (69 permits).
- creation of one-way circulation via a new driveway with a one-way entrance and one-way exit onto Pratt Avenue.
- relocation of many existing activities from Greystone to the former Copia site in the City of Napa to make room for expanded and improved classroom space at Greystone, and expand the public accessibility of the CIA presence in the Napa Valley, through development of the former Copia site.

- continued CIA-provision of "shared" rental cars for students when needed.
- relocation of existing weekday activities from Greystone to the former Copia site in the City of Napa, specifically:
  - 5 of the existing 10 administrative staff will move
  - 14 (all) participants in the Strategic Initiatives Group program will move
  - 1 of the existing 6 purchasing staff will move
  - 26 of the existing 42 Continuing Ed and Food Enthusiast Program students will move
  - Shift # 2 restaurant staff (10 staff) will all move, and restaurant patrons served will be half of existing levels, all served by students on site. The Wine Spectator at Greystone Restaurant (WSGR) is currently operated as a 190 seat restaurant open 362 days per year with lunch and dinner service. The CIA has also operated a teaching kitchen for a number of years in the Flavor Discovery Center (FDC) that allowed students in the Farm to Table component of their educational program to have educational experiences from growing and harvesting the food, to preparing and serving the food in an educational setting with 58 seats. In conjunction with the use permit amendments contemplated under this Master Plan, the WSGR will be eliminated. The program in the FDC will then become the CIA's remaining restaurant (aside from the Café) and will continue to be student-run but will serve meals only five days a week for 36 weeks (180 days) per year.
  - Tourist activity will decrease due to the elimination of the 190-seat WSGR and relocation of many of the enthusiast programs to Copia.

## IV. EXISTING CONDITIONS (WITHOUT PROJECT)

### A. SITE DESCRIPTION, ROADWAYS, SIDEWALKS, BIKEWAYS AND PUBLIC TRANSIT

Vineyard Lodge is located along the west side of the two-lane Pratt Avenue in the northern part of the City of St. Helena (see **Figure 1**). The Vineyard Lodge driveway connection is provided along Pratt Avenue (see **Figure 2**). The driveway has single entry and exit lanes, but both lanes are wide enough to provide two-way (inbound and outbound) traffic flow. There are no directional markings on the Vineyard Lodge driveway connections to Pratt Avenue.

**State Route 29-128 (SR 29)** is a two-lane north-south highway in the City of St. Helena. At the Pratt Avenue tee intersection the roadway is 48 feet wide curb to curb. A 75-foot-long left turn lane is provided on the southbound SR 29 approach to Pratt Avenue. Curb, gutter and sidewalk line both sides of the highway at Pratt Avenue. North of Pratt Avenue there is a tree-lined, unsurfaced pedestrian path along the west side of the highway and an unsurfaced bicycle-pedestrian path along the east side of the highway.

**Pratt Avenue** is a two-lane collector roadway connecting SR 29 with Silverado Trail. It is about 40 feet wide in the vicinity of SR 29. Pratt Avenue is stop sign controlled on its approach to SR 29 and the westbound approach lane is 20 feet wide, allowing left and right turning vehicles to separate. Fronting Vineyard Lodge, the Pratt Avenue travel lanes are about 25.5 feet wide, and along the north side (the Vineyard Lodge frontage), there is a 13-foot wide, 160+-foot long parking bay. Sidewalks are in place fronting the project site, but sidewalks are discontinuous along the north and south sides Pratt Avenue.

**Figure 3** shows existing lane geometries and intersection control.

### ***Bicycle and Multi-Use Path Facilities***

St. Helena's existing and proposed bicycle network is defined in the *St. Helena Bicycle Plan*, which is tied into, and consistent with, the *Napa Countywide Bicycle Plan*. As stated in the Plan, the network includes Class I paths, Class II bicycle lanes, and Class III bike routes in order to maximize connectivity throughout the community and to destinations beyond St. Helena.

Bicycle Facilities relevant to the project area are defined below, consistent with the *St. Helena Bicycle Plan (January 2012)*.

#### **Class I - Multi-Use Path**

Class I bicycle facilities, known as bike paths, are multi-use facilities that provide a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross flows of motorized traffic minimized.

#### **Class II Bike Lane**

Class II facilities, known as bike lanes, provide a striped and signed lane for one-way bicycle travel on a street or highway. The minimum width for bike lanes ranges between four and five feet depending upon the edge of roadway conditions (curbs). Bike lanes are demarcated by a six-inch white stripe, signage and pavement legends.

#### **Class III Bike Route**

Class III facilities, known as bike routes, provide signs for shared use with motor vehicles within the same travel lane on a street or highway. Bike routes may be enhanced with warning or guide signs and shared lanes marked with pavement stencils. While Class III routes do not provide measures of separation, they have an important function in providing continuity to the bikeway network.

Figure 1 of the St. Helena Bike Plan shows the following for study roadways:

State Route 29 (Main Street) northbound from Pratt Avenue, is proposed as a link in the planned countywide Vine Trail Alignment, with a Class I Multi-Use Bike Path northbound, extending past the CIA-Greystone facility, north as far as Calistoga. Just east of S.R. 29 (Main Street) on Pratt Avenue, the Vine Trail Alignment loops north to connect to a proposed York Creek Class I Multi-Use Bike Path, then rejoins S.R. 29 just north of Pratt Avenue. State Route 29 (Main Street) southbound is an existing Primary Class II Bike Route and is proposed to have a Class II Bike Lane.

Eastbound Pratt Avenue between State Route 29 (Main Street) and the railroad tracks is proposed to have a Class II Bike Lane; through this segment, westbound Pratt Avenue is proposed to have a Class I Multi-Use Bike Path and is a link in the planned Countywide Vine Trail Alignment. Eastbound Pratt Avenue between the railroad tracks and Silverado Trail, which includes the portion of Pratt Avenue fronting the Vineyard Lodge site, is proposed to have a Class III Bike Route. These facilities would connect with matching improvements on State Route

20 (Main Street) north of Pratt Avenue, and on Silverado Trail north and south of Pratt Avenue.

### ***Public Transit***

The *VINE* is the region's bus system for the County of Napa. Two routes pass through St. Helena along S.R. 29: routes 10 and 29. Route 10 provides service from Calistoga to Napa, including stops in St. Helena, Rutherford and Oakville, running seven days a week, all day and including weekends. Route 29, the Vine Express, is a commuter bus operating from early morning through late afternoon, Monday through Friday. The Vine Express extends from Calistoga to the Vallejo Ferry Terminal and El Cerrito BART. Service hours are Monday through Friday, 5:20 am to 9:10 pm, Saturday 6:00 am to 8:10 pm, and Sundays 8:30 am to 7:00 pm.

The bus stops nearest the project site are two Route 10 northbound stops located at the Pratt Avenue/SR 29 (Main Street) intersection and opposite CIA Greystone, on the east side of the highway.

The *St. Helena Shuttle* is an on-demand shuttle service available for a fee of \$1.00 per trip. Service is available Monday through Friday 7:00 am to 9:00 PM, Friday and Saturday 7:00 am to 11:00 pm, and Sunday (May through November) 11:00am to 9:00 pm.

*VINE Go* is an origin to destination, shared ride service which provides demand response for persons with disabilities in the cities of Calistoga, St. Helena, Napa, American Canyon, the Town of Yountville and the unincorporated areas of Napa County. VINE Go is the ADA paratransit service complementary to the fixed route operators and runs at times corresponding to the fixed routes.

## **B. OPERATION OF THE PRATT AVENUE/S.R. 29-128 (MAIN STREET) INTERSECTION**

### **1. Volumes**

Traffic counts were conducted by Crane Transportation Group at the Pratt Avenue/S.R. 29-128 intersection on Thursday, May 12, from 7:00 AM to 6:00 PM. The peak hours of total traffic passing through the intersection was determined to be 7:45 to 8:45 AM and 4:00 to 5:00 PM on Thursday. Students residing at Vineyard Lodge do not attend classes on weekends, thus this analysis focuses on weekday activities.

In order to determine traffic conditions during the peak summer/fall tourist season and a time of peak activity at CIA, the May counts were adjusted based upon Caltrans' seasonal traffic count information (PeMS data) for Highway 29 in St. Helena. Resultant peak season Thursday peak hour volumes are presented in **Figure 4**.

### **2. Analysis Methodology**

Transportation engineers and planners commonly use a grading system called level of service (LOS) to measure and describe the operational status of the local roadway network. LOS is a



description of the quality of a roadway facility's operation, ranging from LOS A (indicating free-flow traffic conditions with little or no delay) to LOS F (representing oversaturated conditions where traffic flows exceed design capacity, resulting in long queues and delays). Intersections, rather than roadway segments between intersections, are almost always the capacity controlling locations for any circulation system.

**Signalized Intersections.** For signalized intersections, the 2010 *Highway Capacity Manual* (Transportation Research Board, National Research Council) methodology was utilized. With this methodology, operations are defined by the level of service and average control delay per vehicle (measured in seconds) for the entire intersection. For a signalized intersection, control delay is the portion of the total delay attributed to traffic signal operation. This includes delay associated with deceleration, acceleration, stopping, and moving up in the queue. **Table 1** summarizes the relationship between delay and LOS for signalized intersections.

**Unsignalized Intersections.** For unsignalized (all-way stop-controlled and side-street stop-controlled) intersections, the 2010 *Highway Capacity Manual* (Transportation Research Board, National Research Council) methodology for unsignalized intersections was utilized. For side-street stop-controlled intersections, operations are defined by the level of service and average control delay per vehicle (measured in seconds), with delay reported for the stop sign controlled approaches or turn movements, although overall delay is also typically reported for intersections along state highways. For all-way stop-controlled intersections, operations are defined by the average control delay for the entire intersection (measured in seconds per vehicle). The delay at an unsignalized intersection incorporates delay associated with deceleration, acceleration, stopping, and moving up in the queue. **Table 2** summarizes the relationship between delay and LOS for unsignalized intersections.

### 3. Existing Peak Season Operation

**Table 3** shows that during the peak traffic hour on a summer/fall 2016 weekday, with 2016 (without Master Plan project) volumes, the Pratt Avenue/S.R. 29-128 intersection would experience AM peak hour LOS D operation, with 30.3 seconds average delay for westbound Pratt Avenue turns, and PM peak hour LOS E operation with 39.3 seconds average delay for westbound Pratt Avenue turns.

## C. SIGNAL WARRANT EVALUATION – PRATT AVENUE/S.R. 29-128 (MAIN STREET)

### 1. Analysis Methodology

Traffic signals are used to provide an orderly flow of traffic through an intersection. Many times they are needed to offer side street traffic an opportunity to access a major road where high volumes and/or high vehicle speeds block crossing or turn movements. They do not, however, increase the capacity of an intersection (i.e., increase the overall intersection's ability to accommodate additional vehicles) and, in fact, often slightly reduce the number of total vehicles that can pass through an intersection in a given period of time. Signals can also cause an increase in traffic accidents if installed at inappropriate locations.



There are 9 possible tests for determining whether a traffic signal should be considered for installation. These tests, called "warrants", consider criteria such as actual traffic volume, pedestrian volume, presence of school children, and accident history. The intersection volume data together with the available collision histories were compared to warrants contained in the *Manual on Uniform Traffic Control Devices* (MUTCD), Federal Highway Administration, 2014, California Supplement, which has been adopted by the State of California as a replacement for *Caltrans Traffic Manual*. Section 4C of the MUTCD provides guidelines, or warrants, which may indicate need for a traffic signal at an unsignalized intersection. As indicated in the MUTCD, satisfaction of one or more warrants does not necessarily require immediate installation of a traffic signal. It is merely an indication that the local jurisdiction should begin monitoring conditions at that location and that a signal may ultimately be required.

In this report, at the request of the City traffic engineer, Warrant 3, the peak hour volume warrant, has been applied to volumes at the SR 29-128/Pratt Avenue intersection. This warrant is often used as an initial check of signalization needs since peak hour volume data is typically available and this warrant is usually the first one to be met. Warrant 3 is based on a curve and takes only the hour with the highest volume of the day into account. In addition, Warrant #1, the test for the highest eight hour volumes is also included, and the accident warrant (Warrant #7) has been evaluated at the SR 29-128/Pratt Avenue intersection based upon accident data provided by the City of St Helena through the SWITRS (Statewide Integrated Traffic Records System) data base. The feasibility of a roundabout at this location is constrained by existing structures: a residence on the east, a new hotel access driveway (including a historic wall) on the west, as well as right-of-way limitations. A roundabout is not considered feasible at this intersection due to space constraints.

## 2. Existing Conditions

Tables 4a and 4b show that volumes at the Pratt Avenue/ SR 29-128 intersection would not meet urban warrant #1 (the warrant for the 8 highest volume hours) or urban peak hour warrant #3 criteria for signalization during either of the weekday peak traffic hours (AM or PM) for existing conditions. Please see the tables and warrant charts in the **Appendix**.

Warrant #7, the Crash Experience signal warrant conditions are intended for application where the severity and frequency of crashes are the principal reasons to consider installing a traffic control signal.

California MUTCD, Chapter 4C specifies that the need for a traffic control signal shall be considered if an engineering study finds that *all* of the following criteria are met:

- a. Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency; and
- b. Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash; and

- c. For each of any 8 hours of an average day, the vehicles per hour (vph) given in both of the 80 percent columns of Condition A in Table 4C-1 (see Section 4C.02), or the vph in both of the 80 percent columns of Condition B in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80 percent of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

Accident data provided by the City of St. Helena from SWITRS (Statewide Integrated Traffic Reporting System) revealed that over the past five years, there have not been five or more reported crashes at this intersection within any 12-month period. At most, there were 4 crashes between 10/21/11 and 10/24/12. There were three reported crashes in 2011, one in 2012, two in 2013 and 2014, and one in 2015. The appendix includes the accident data provided by the City.

#### **D. CITY OF ST. HELENA GENERAL PLAN (1993) SIGNIFICANCE CRITERIA USED IN TRAFFIC IMPACT EVALUATIONS**

The City of St. Helena's adopted transportation impact criteria (1993 General Plan) are as follows:

- a. All signalized intersections in St. Helena should maintain LOS C except along Main Street, where LOS D is permitted. Exceptions to this policy are that lower service levels shall be permitted at any location where the existing LOS does not meet this standard and in which case the LOS cannot be worsened any further.
- b. All signalized intersections must maintain LOS C. If the LOS degrades below LOS C, an evaluation of the need for traffic signalization shall be undertaken according to standard Caltrans signal warrants as described below. If signals are not initially warranted, the location shall continue to be monitored for signal warrants on a regular basis.

### **V. FUTURE YEAR 2018 and YEAR 2035 (WITHOUT PROJECT) CONDITIONS**

#### **A. ANALYSIS HORIZON YEARS FOR WITHOUT PROJECT OPERATING CONDITIONS**

##### **1. Overview**

CIA management projects that the proposed Master Plan could be fully completed by 2018, and General Plan projections extend to year 2035. Therefore, these horizon years have been used for evaluation.

## 2. Year 2018 and Year 2035 Base Case (Without Master Plan) Traffic Volumes

Year 2018 weekday AM and PM peak hour (without project) volumes have been developed using traffic growth projections developed for S.R.29-128 in St. Helena as part of the General Plan traffic model. Projections contained in the model show an approximate 2.25 percent per year growth rate for S.R.29-128 traffic between 2015 and 2035. These rates have been applied to the year 2016 summer/fall AM and PM peak hour volumes to achieve 2018 projections at the study intersections (see **Figure 5**); in addition, volumes from the Las Alcobas Hotel Driveway opposite Pratt Avenue, have been added.<sup>2</sup> Year 2035 weekday AM and PM peak hour volumes are derived directly from the General Plan projections at the Pratt Avenue/S.R. 29-128 intersection, with intersection geometrics and volumes at the CIA driveway factored to be consistent with the General Plan projections (see **Figures 6 and 7**).

## 3. Year 2018 Peak Season Base Case (Without Master Plan Project) Intersection Operation

**Table 3** shows that during the peak traffic hour on a summer/fall 2018 weekday, with 2018 (without project) volumes, the Pratt Avenue/Las Alcobas Hotel Driveway/S.R. 29-128 (Main Street) intersection would experience AM peak hour LOS E operation, with about 35.9 seconds average delay for turns from the eastbound Las Alcobas Hotel Driveway, and LOS F operation, with 64.0 seconds average delay for turns from westbound Pratt Avenue. PM peak hour would experience LOS E operation, with 36.4 seconds average delay for turns from the eastbound Las Alcobas Hotel Driveway, and LOS F operation, with 93.4 seconds average delay for turns from westbound Pratt Avenue.

## 4. Year 2035 Peak Season Base Case (Without Master Plan Project) Intersection Operation

**Table 3** shows that during the peak traffic hour on a summer/fall 2035 weekday, with 2035 (without project) volumes, the Pratt Avenue/Las Alcobas Hotel Driveway/S.R. 29-128 (Main Street) intersection would experience AM peak hour LOS F operation, with 87.1 seconds average delay for turns from the eastbound Las Alcobas Hotel Driveway, and LOS F operation, with extreme delay (over 120 seconds average delay) for turns from westbound Pratt Avenue. PM peak hour would experience LOS F operation, with about 92.1 seconds average delay for turns from the eastbound Las Alcobas Hotel Driveway, and LOS F operation, with extreme delay (over 120 seconds average delay) for turns from westbound Pratt Avenue.

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<sup>2</sup> The Las Alcobas Hotel will have 68 rooms, a spa for guests only, a 40-seat quality restaurant and one special event per month. Source: *Traffic Impact Report for Las Alcobas Hotel, St Helena, CA* May 29, 2015, prepared for Caltrans District 4 by Crane Transportation Group.

## **B. SIGNAL WARRANT EVALUATION**

### **1. Year 2018 and Year 2035 Without Project Conditions**

Volumes at the Pratt Avenue/ SR 29-128 intersection would not meet warrant #1 criteria (the eight-hour signal warrant) or urban peak hour warrant #3 criteria for signalization during either of the weekday peak traffic hours for 2018 or 2035 without Master Plan conditions. However, by 2035, volumes approach meeting both signal warrant (warrant #1 and #3) criteria. Please see the tables and warrant charts in the **Appendix. Table 3** provides results for signalized operation, with LOS A, B or C for all conditions. The feasibility of a roundabout at this location is constrained by existing structures: a residence on the east, a new hotel access driveway and historic wall on the west, as well as right-of-way limitations. A roundabout is not considered feasible at this intersection due to extreme space constraints, as detailed in a memorandum prepared by Summit Engineering (10/21/16) showing the layout of a 150-foot roundabout diameter overlay of the intersection. The memorandum is included in the appendix to this study.

## **C. PROPOSED LEFT TURN LANE DESIGN**

The civil engineer for the Las Alcobas Hotel, Riechers Spence Associates, prepared a design<sup>3</sup> for the proposed northbound left turn lane with a length of 150 feet. This length would be more than adequate to accommodate the projected maximum storage demand.

# **VI. CULINARY INSTITUTE OF AMERICA VINEYARD LODGE MASTER PLAN TRAFFIC AND PARKING IMPACTS**

## **A. PROPOSED PROJECT**

The CIA Master Plan would result in the following development or activity that would result in changes to trip generation and parking demand in the Master Plan area.

- New Students at Greystone: 100
- All 100 additional students would be living at the Vineyard Lodge housing on Pratt Avenue in St. Helena and attending weekday classes at the Greystone facility. These students will be shuttled to and from the CIA Greystone campus on weekdays, as they would not be allowed to use a personal vehicle to access classes, consistent with the current practice. Alternatively, some students may walk or bike. Shuttle bus service is currently provided every 15 minutes from early morning (5:30 AM) to end of the student day (9:30 PM).
- For parking analysis purposes, the existing ratio of 31% parking permits issued at Vineyard Lodge will be maintained (i.e.,  $224 \text{ beds} / 0.31 = 69 \text{ total parking}$ )

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<sup>3</sup> January 6, 2015.

permits). All students, including those with a permit, will be required to use shuttles to and from daily classes.

## **B. PROJECT TRIP GENERATION**

This study is based upon CIA management-approved projections regarding the planned relocation of programs and staff from the Greystone campus to the new facility in Napa, and the intention to maximize use of CIA-managed housing for students. The CIA can provide housing at lower cost than students can find off-site, outside of CIA facilities. The CIA provides all needed transportation for its students, including rental cars, when needed. All 100 new students will be housed at the expanded Vineyard Lodge, and the additional beds at Vineyard Lodge will also allow additional students to live in CIA housing rather than competing for lodging in St. Helena and other communities. The CIA will maintain its current all-day schedule of shuttle pick-ups/drop-offs, every 15 minutes. By increasing the size of its shuttles, it can maintain the same number of trips to and from Greystone that occur today. These projections have been utilized to determine the net increase or decrease in Thursday AM and PM peak hour traffic due to the proposed Master Plan. As shown in **Figure 8**, the CIA Master Plan project would result in reduced trips to and from the S.R. 29 corridor and the Greystone facility (see the Greystone Trip Generation in the appendix tables showing a decrease of 21 inbound and 3 outbound during the AM peak hour, and 10 inbound and 25 outbound during the PM peak hour) as well as minor trip increases to and from the Vineyard Lodge housing (i.e., 3 inbound and 5 outbound during the AM peak hour, and 7 inbound and 5 outbound during the PM peak hour. On a summer/fall Thursday during the AM and PM peak traffic hours along S.R.29, the Master Plan would be expected to decrease traffic on S.R. 29-128 by 15 two-way trips (AM) and 21 two-way trips (PM) to and from the campus at Greystone. There would be a small component of trips added to Pratt Avenue from the Vineyard Lodge (3 inbound trips and 5 outbound AM peak hour trips and 7 inbound and 5 outbound PM peak hour trips) attributable to students with parking permits traveling to and from downtown St. Helena and the surrounding area.

**CULINARY INSTITUTE OF AMERICA MASTER PLAN  
NET NEW TRIPS SUBTRACTED FROM STATE ROUTE 29 BETWEEN PRATT  
AVENUE AND THE CIA'S GREYSTONE DRIVEWAY**

**WEEKDAY (7:45-8:45 AM)**

|                                                  | <b>NB</b>  | <b>SB</b> |
|--------------------------------------------------|------------|-----------|
| Shuttle Bus To/From Vineyard Lodge Dorms         | 0          | 0         |
| Change due to programs being moved to Napa Copia | - 13       | -2        |
| <b>TOTAL NET NEW TRIPS</b>                       | <b>-13</b> | <b>-2</b> |

**WEEKDAY (4:00-5:00 PM)**

|                                                                                                    | <b>NB</b> | <b>SB</b>  |
|----------------------------------------------------------------------------------------------------|-----------|------------|
| Shuttle Bus To/From Vineyard Lodge Dorms                                                           | 0         | 0          |
| Change due to programs being moved to Napa Copia                                                   | - 6       | -15        |
| <b>TOTAL NET NEW TRIPS on SR 29 (Main Street) between Pratt Avenue and the Greystone driveway.</b> | <b>-6</b> | <b>-15</b> |

\*See appendix tables for reduction in trips due to specific activities at the Greystone facility.

As shown in the Greystone Trip Generation table (see the appendix tables), the 15-trip decrease in Master Plan-related trips during summer/fall Thursday AM peak traffic conditions on SR 29-128 would be primarily related to the reduction in Administrative staff and the SIG program at Greystone; the 21-trip decrease in Master Plan-related trips during summer/fall Thursday PM peak traffic conditions on SR 29-128 would be primarily related to the relocation of the restaurant and staff, decrease in tourist levels, as well as reductions in Administrative staff and the SIG program.

Three pedestrians and two bicyclists were observed walking or biking to and from Vineyard Lodge on the weekday count day during good weather. Most students were observed to board the shuttles entering and exiting the parking lot every 15 minutes from 5:30 AM to 9:30 PM. Due to the frequency of the shuttle service, very little additional pedestrian and bicycle activity would be expected traveling to and from the Greystone facility.

**C. PROJECT IMPACTS TO OPERATION OF THE PRATT AVENUE/ LAS  
ALCOBAS HOTEL DRIVEWAY/S.R. 29-128 (MAIN STREET)  
INTERSECTION**

**Table 3** shows that the Pratt Avenue/S.R. 29-128 intersection would experience AM peak hour LOS D operation, with 30.5 seconds average delay for westbound Pratt Avenue (an increase in average delay of 0.2 second), and LOS E operation, with 39.6 seconds average delay during the PM peak hour for turns on the westbound Pratt Avenue approach (an increase in average delay of

0.3 second). The project increment of 4 outbound trips from Vineyard Lodge would add about 6 percent additional traffic to the westbound intersection approach during the existing AM and PM peak hours, adding to the existing lengthy delays.

With 2018 (with Master Plan project) volumes (see **Figure 9**), during the peak traffic hour on a summer/fall weekday morning and afternoon, the Pratt Avenue/Las Alcobas Hotel Driveway/S.R. 29-128 intersection would experience AM peak hour LOS E operation, with 35.1 seconds average delay for westbound Pratt Avenue (a decrease in average delay of 0.8 second), and LOS F operation, with 64.9 seconds average delay during the PM peak hour for turns on the Las Alcobas Hotel Driveway approach (an increase in average delay of 0.9 second). The intersection would experience PM peak hour LOS E operation with 35.4 seconds average delay (an increase in delay of 1 second). Westbound Pratt Avenue turns would experience extreme delays (LOS F) without the Master Plan project during the AM and PM peak hours. The project increment of 4 trips would add to the existing lengthy delays; it would add 5.5 percent additional traffic to the westbound intersection approach during the AM and PM peak hours.

With 2035 (with Master Plan) volumes (see **Figure 10**), the Pratt Avenue/Las Alcobas Hotel Driveway/S.R. 29-128 intersection would experience AM peak hour LOS F operation, with 83.6 seconds average delay for turns from the Las Alcobas Hotel Driveway approach (a decrease in average delay of 3.5 seconds), and PM peak hour LOS F operation, with 88.3 seconds average delay for turns from the Las Alcobas Hotel Driveway approach (a decrease in average delay of 3.8 seconds). The westbound Pratt Avenue turns would experience extreme delays (LOS F) without the Master Plan project during the AM and PM peak hours; the project increment of 4 trips would add to the existing extreme delays (LOS F with over 120 second delays), and would add 5 percent additional traffic to the westbound intersection approach during the AM and PM peak hours.

#### **D. SIGNAL WARRANT EVALUATION**

##### **1. Year 2018 and Year 2035 With Master Plan Conditions**

Volumes at the Pratt Avenue/ SR 29-128 intersection would not meet warrant #1 criteria (the hour-hour signal warrant) or urban peak hour warrant #3 criteria for signalization during either of the weekday peak traffic hours for 2018 or 2035 with Master Plan conditions. However, by 2035, volumes approach meeting both signal warrant (warrant #1 and #3) criteria. Please see the warrant charts in the **Appendix**. **Table 3** provides results for signalized operation, with LOS A, B or C for all conditions.

#### **E. SIGHT LINES AT THE VINEYARD LODGE DRIVEWAY**

Sight lines would be acceptable for drivers turning from the project driveway to Pratt Avenue, based upon the criteria provided in the Caltrans March 2014 *Highway Design Manual*. Sight lines to the east and west would extend over 500 feet. Based upon travel speeds of 30 miles per hour at the site for vehicles traveling east and west on Pratt Avenue, the required stopping sight distance would be 200 feet. At higher speeds, such as 45 or 50 miles per hour, the required stopping sight distance would be up to 430 feet (for a 50 mph speed). Therefore, sight lines would be acceptable assuming that no landscaping is planted along the site frontage that would



ultimately grow and block driver views.

## F. VINEYARD LODGE PARKING DEMAND

### 1. Overview

The Vineyard Lodge property currently has 85 parking spaces for its 101 beds. Those spaces are never fully-occupied because most students travel to the Napa Valley without their own vehicle. For example, for its current 96 residents, only 30 parking permits have been issued for on-site parking. The CIA maintains a maximum ratio of beds to parking spaces at 31%. This is possible because it operates daily, on-time shuttles for students and also provides an on-demand car rental operation where students can rent cars on an as-needed basis. This has proven to be highly successful at reducing the need for dedicated parking spaces for the students. Based on the current parking needs, the CIA proposes a total of 72 spaces for the 224 on-site peak occupants. This would allow for the 31% parking maximum (69 spaces) and three spaces for CIA-supplied “shared” rental vehicles, available to students by arrangement.

City parking code for dormitory facilities is two spaces for the “resident owner” and one space for each guest room (interpreted here as “each bed”). This would result in a requirement of 226 parking spaces, or 154 spaces more than planned for the new facility. The proposal of 72 parking spaces for a 224-bed dormitory would result in a ratio of 0.32 spaces per bed, more equivalent to a ratio used for senior assisted living housing than for student dorms. However, the CIA-operated facility functions very much like an assisted living facility, as almost all transport is controlled by the facility management on an all-day basis. Unlike assisted living facilities, rules are enforced for residents strictly limiting vehicle parking permits, and providing shared cars plus rental car options by the facility management (CIA). The CIA has a record of effective management of this lodging facility extending for over twelve years, thus, the 72-space parking total will be enforced to ensure that student parking space demand does not exceed available supply. Parking enforcement will be required (parking permits will need to be displayed and monitored whenever the Lodge is at or near capacity). At maximum occupancy the facility will have no capacity for visitor parking.

### 2. Existing May 2016 Parking Demand

Hourly, on-site parking surveys were conducted by Crane Transportation Group on Thursday, May 12, 2016, considered to be a full-activity “typical” day at the CIA facilities. The weather was clear and mild on both days. **Table 5** shows the record of hourly parking totals. At maximum, there were 42 cars parked in the 85-space parking lot. There were one to three service vehicles parked during the day in the unstriped service parking area to the east of the main building. Parking was not observed to be monitored for permit holders versus visitors. At all surveyed times there were 43 or more available parking spaces in the Vineyard Lodge parking lot.

**Thursday conditions:** There were 96 students in residence, and at maximum, there were 42 cars in the Vineyard Lodge parking lot.

## VII. CONCLUSIONS AND RECOMMENDATIONS

- The project would not result in significant impacts to traffic and transportation as evaluated per the City's significance criteria (listed in Section IV.D). Due to the project's reduction of through traffic on SR 29-128 (Main Street) and minor increase of traffic on the Pratt Avenue westbound approach to Main Street, "with project" conditions result in a reduced overall traffic volume at the Pratt Avenue/S.R. 29-128 intersection. Project volumes would not result in a "letter" change in intersection Level of Service operation, and would result in minor increased delay due to 3 added westbound Pratt Avenue left turns during the AM and PM peak hours – adding to the long delays on the westbound Pratt Avenue approach. Project traffic would not result in signal warrant #1 or #3 being met.
- Recommendation: Maintain any proposed landscaping along the project's Pratt Avenue frontage east and west of the Vineyard Lodge driveway at low heights in order to ensure acceptable sight lines for drivers exiting the site.
- Recommendation: The CIA should require display of parking permits for all student automobiles parked at the Vineyard Lodge site to ensure no spill-over parking by the student residents. Guests of students will need to be informed of the necessity of parking at Greystone and using the shuttles when visiting Vineyard Lodge. Strict parking enforcement will be required (i.e., parking permits will need to be displayed and monitored) whenever the Lodge is at or near capacity.

## **FIGURES**

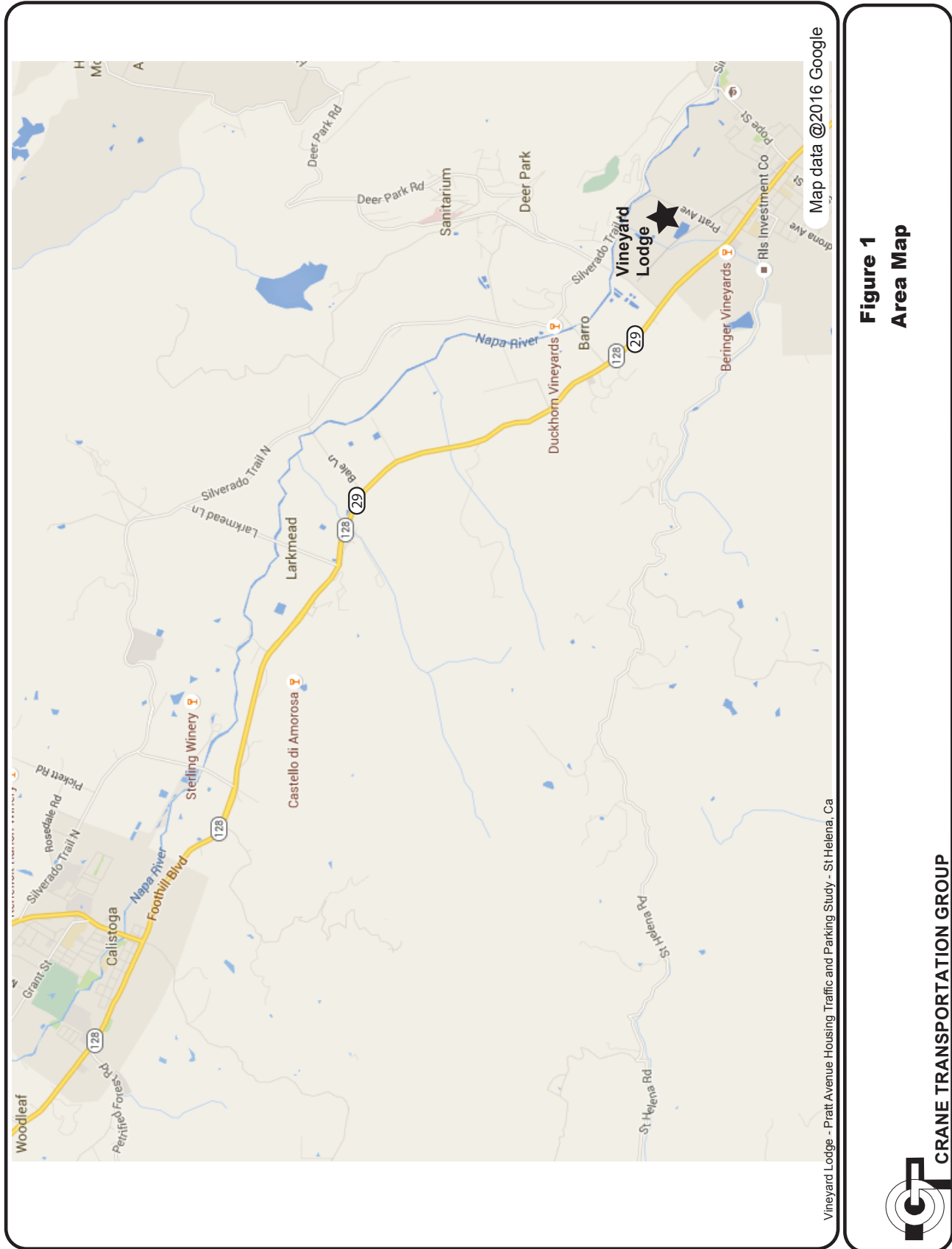
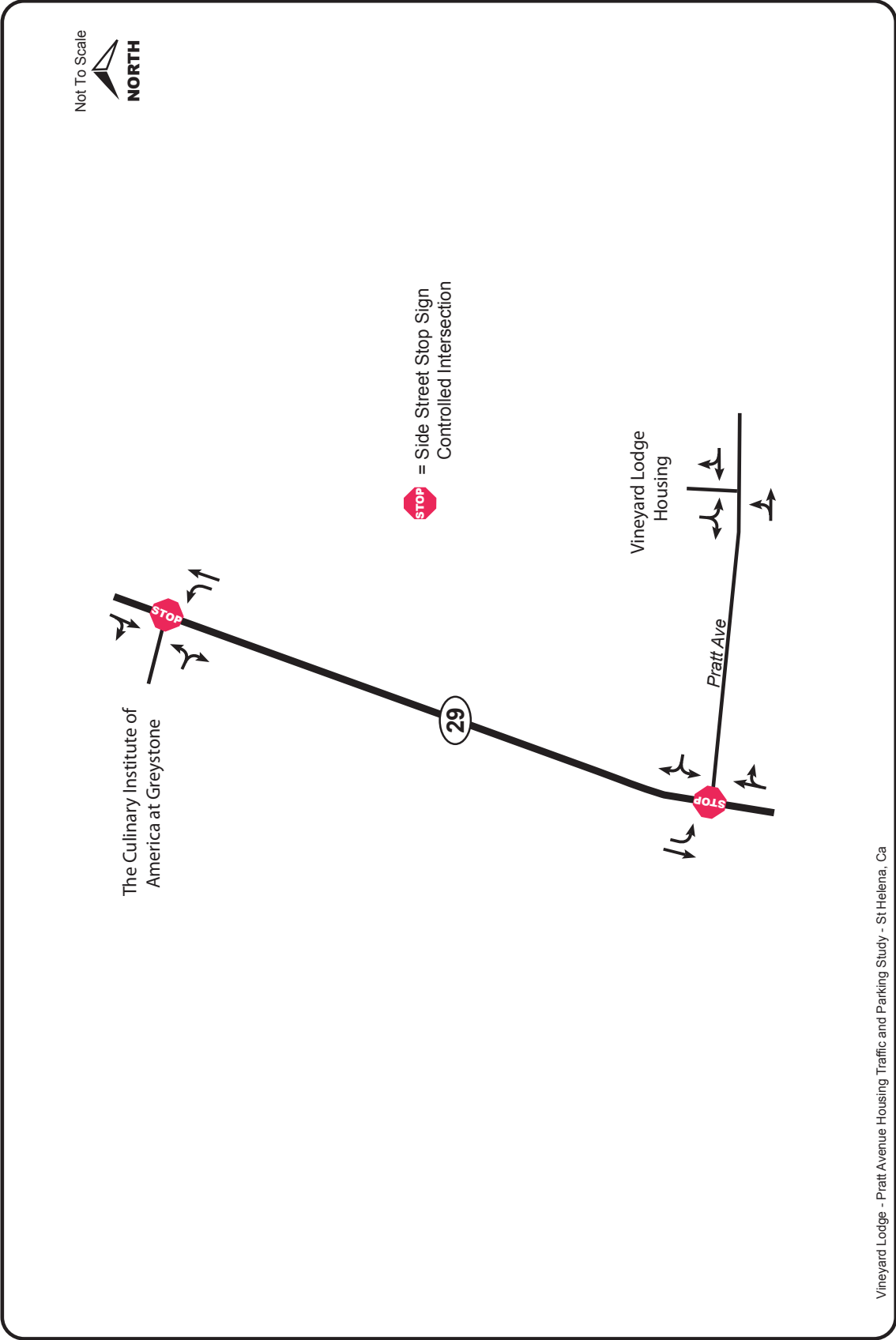
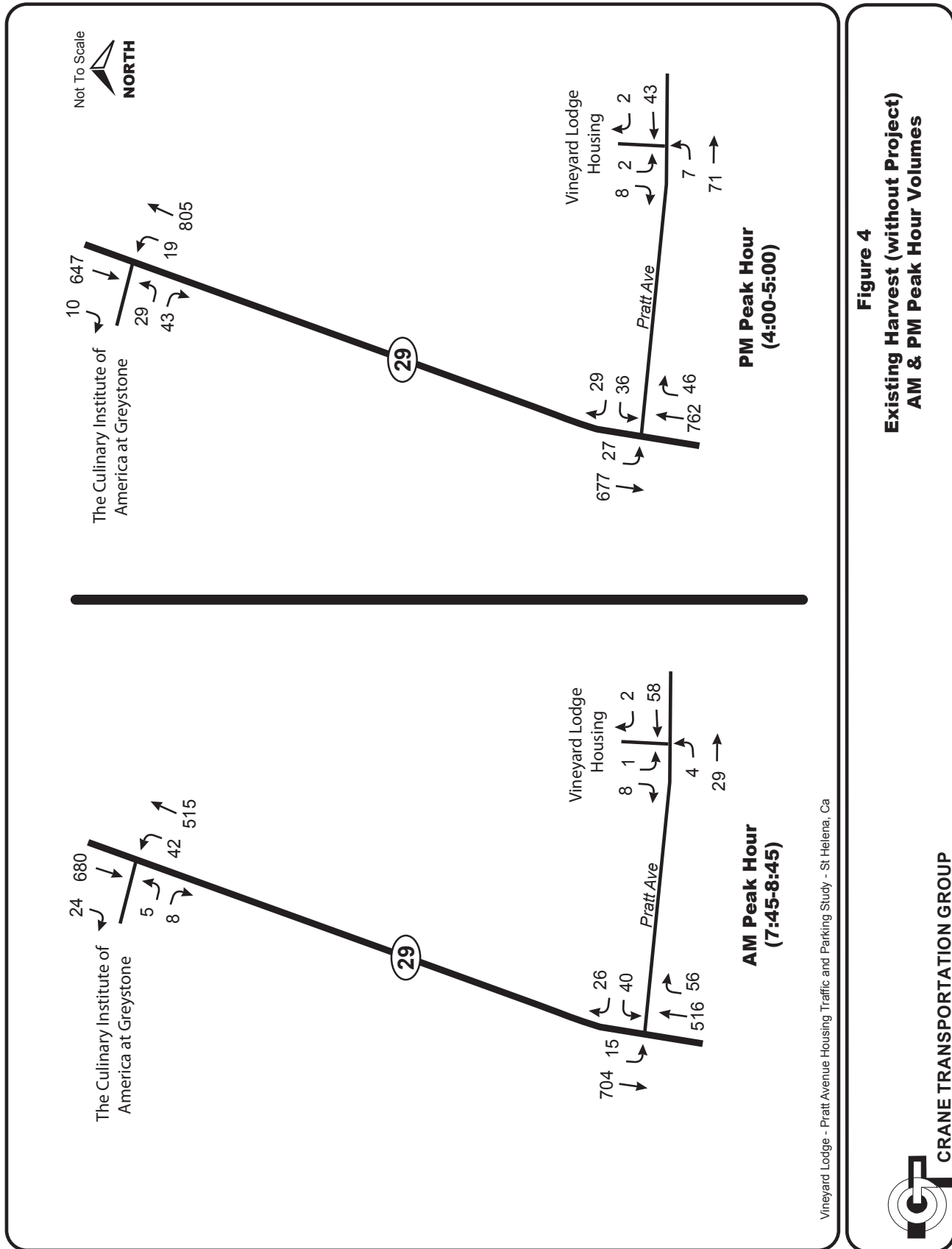




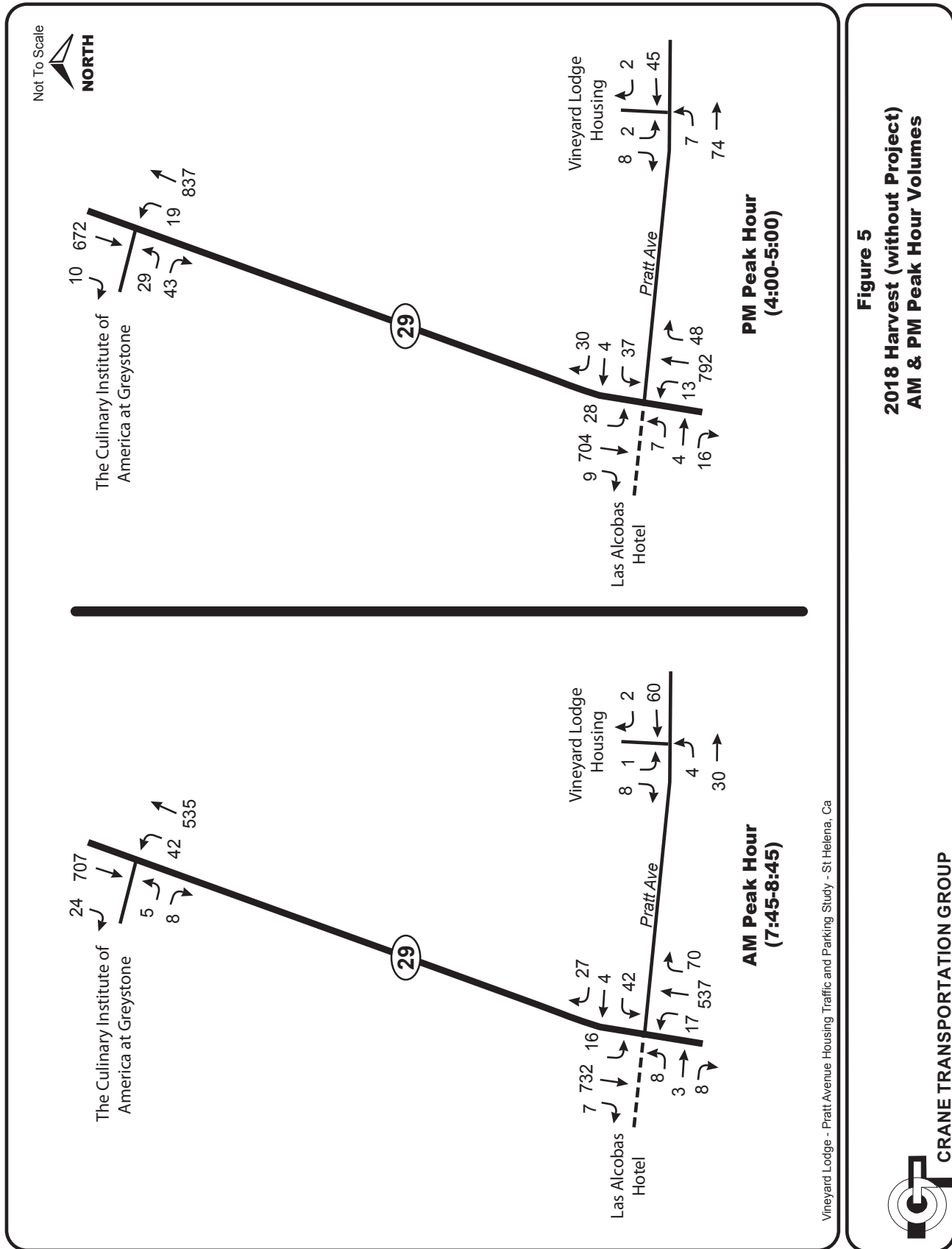
Figure 2  
Vineyard Lodge Site Plan

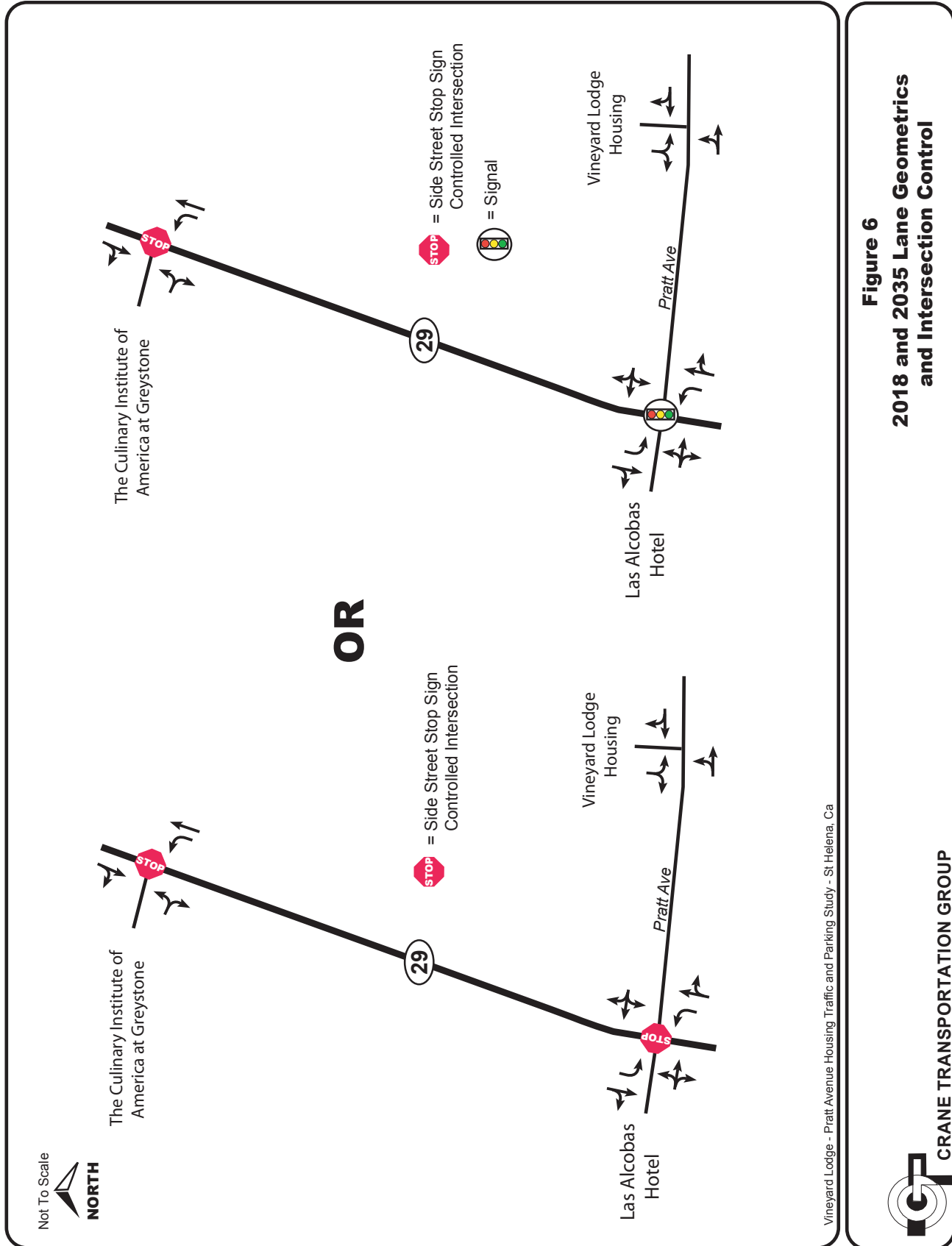


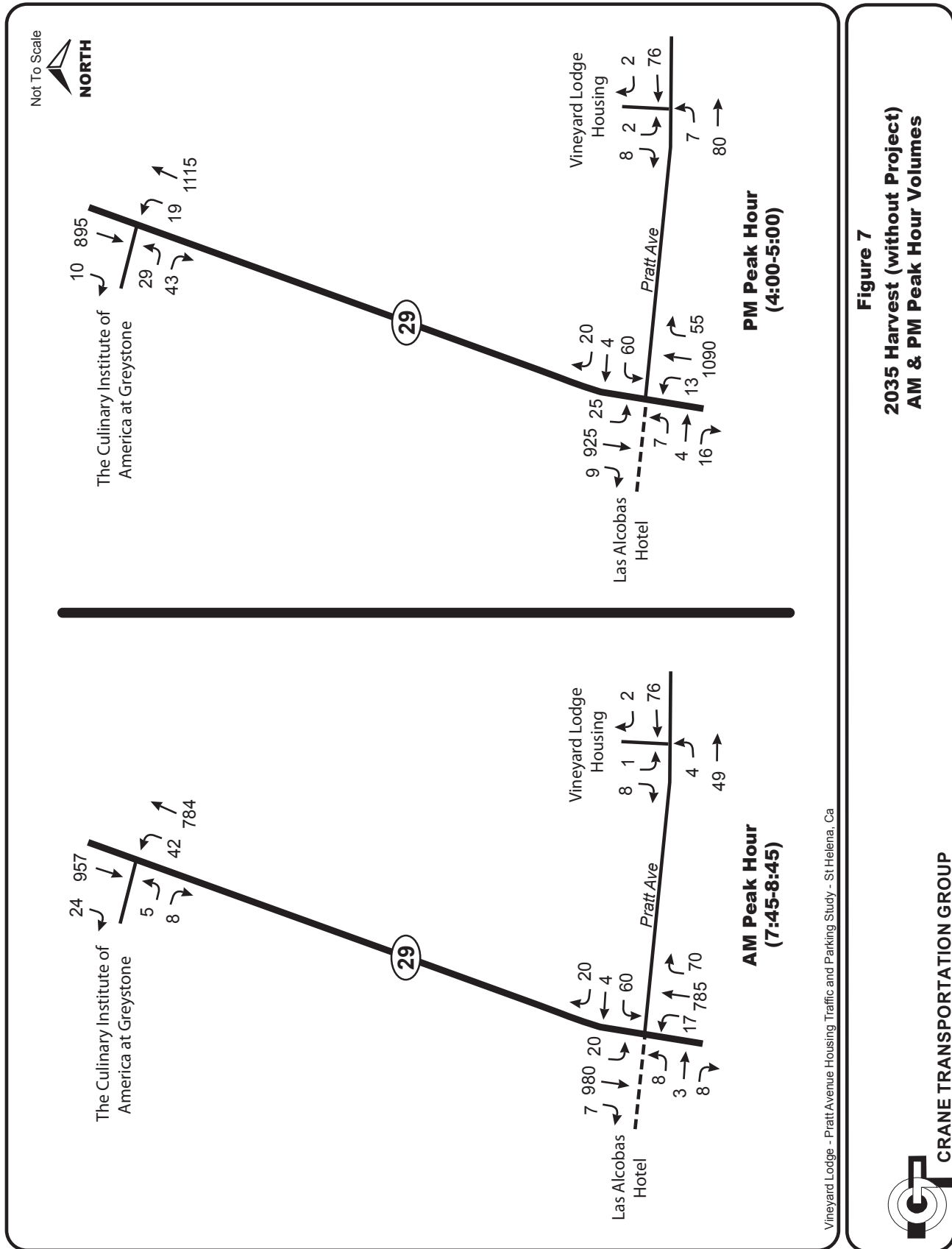
**Figure 3**  
**Existing Lane Geometrics**  
**and Intersection Control**

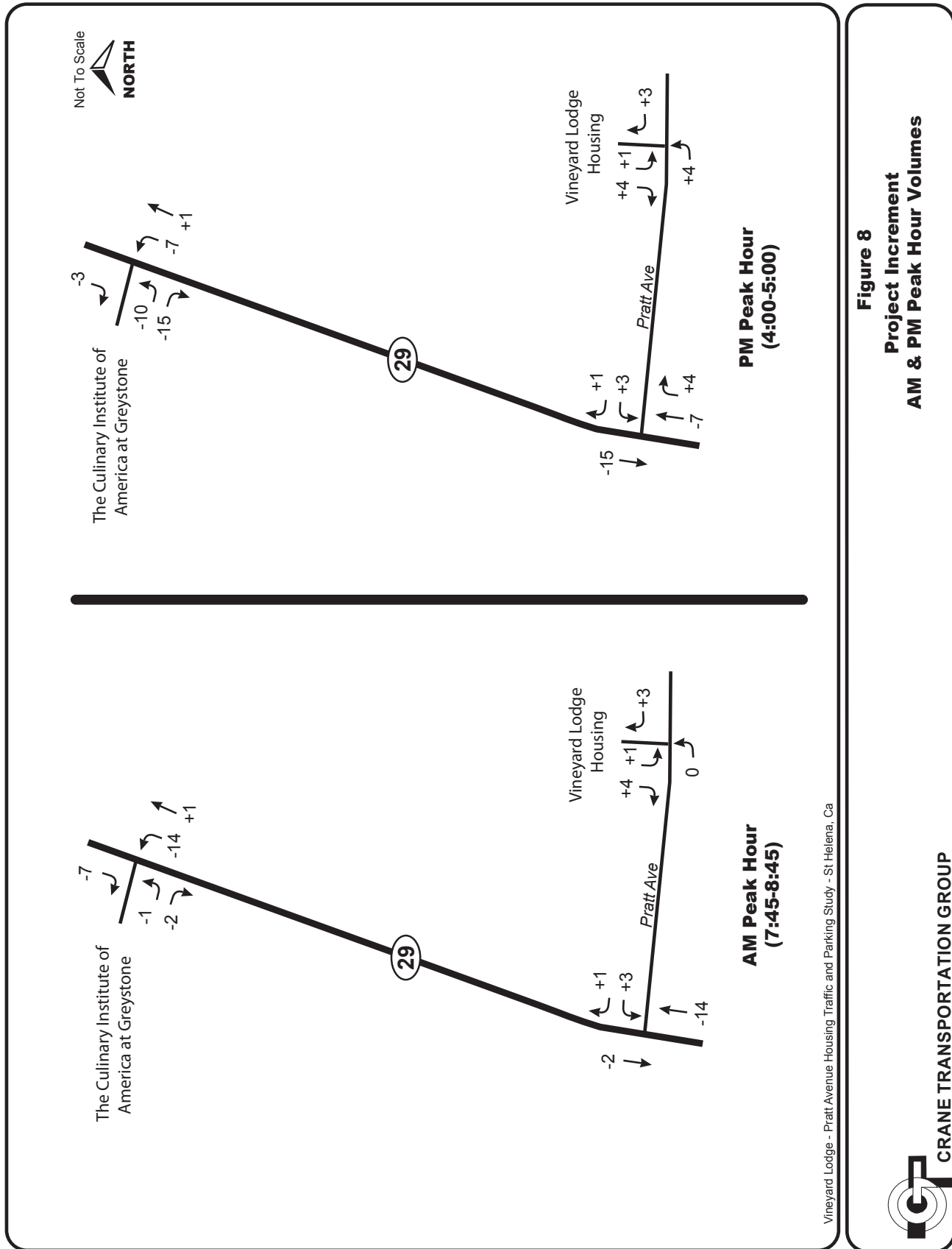


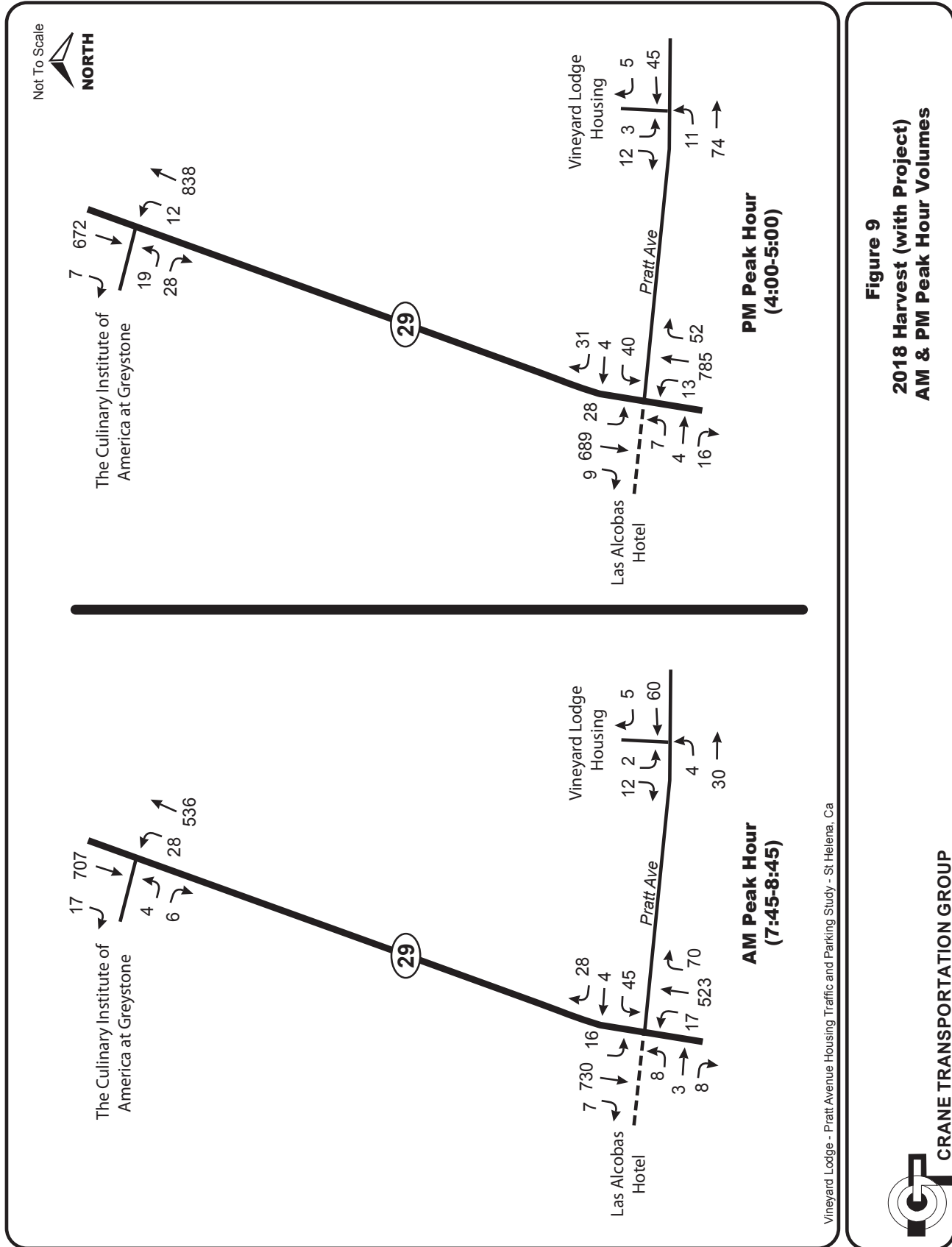


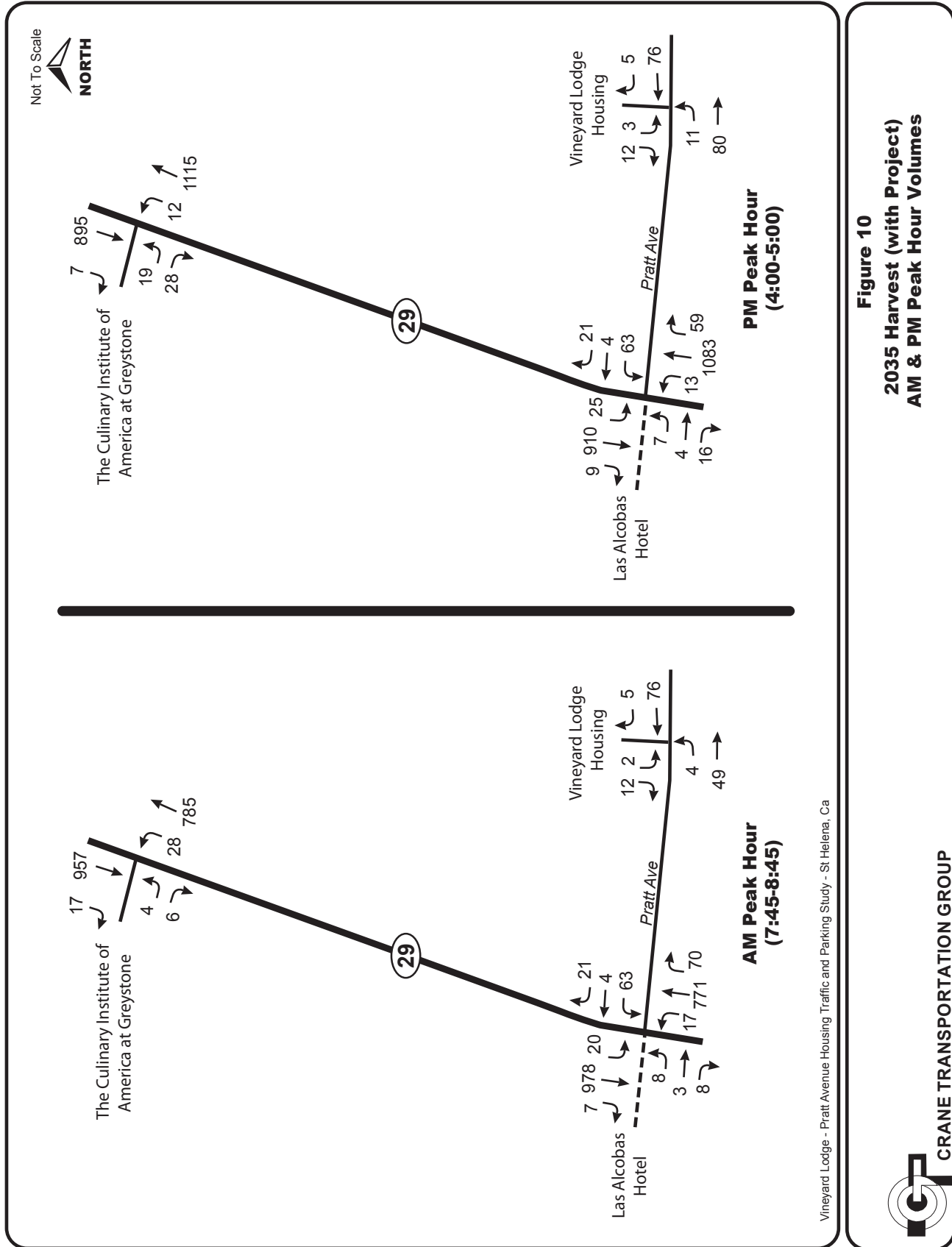












## **TABLES**



Table 1

**SIGNALIZED INTERSECTION LOS CRITERIA**

| Level of Service | Description                                                                                                                                                                                                         | Average Control Delay (Seconds Per Vehicle) |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| A                | Operations with very low delay occurring with favorable progression and/or short cycle lengths.                                                                                                                     | $\leq 10.0$                                 |
| B                | Operations with low delay occurring with good progression and/or short cycle lengths.                                                                                                                               | 10.1 to 20.0                                |
| C                | Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.                                                                              | 20.1 to 35.0                                |
| D                | Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, and/or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.    | 35.1 to 55.0                                |
| E                | Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay. | 55.1 to 80.0                                |
| F                | Operation with delays unacceptable to most drivers occurring due to oversaturation, poor progression, or very long cycle lengths.                                                                                   | $> 80.0$                                    |

Source: 2000 Highway Capacity Manual (Transportation Research Board).

Table 2

**UNSIGNALIZED INTERSECTION LOS CRITERIA**

| Level of Service | Description                                                                                                                                                                         | Average Control Delay (Seconds Per Vehicle) |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| A                | Little or no delays                                                                                                                                                                 | $\leq 10.0$                                 |
| B                | Short traffic delays                                                                                                                                                                | 10.1 to 15.0                                |
| C                | Average traffic delays                                                                                                                                                              | 15.1 to 25.0                                |
| D                | Long traffic delays                                                                                                                                                                 | 25.1 to 35.0                                |
| E                | Very long traffic delays                                                                                                                                                            | 35.1 to 50.0                                |
| F                | Extreme traffic delays with intersection capacity exceeded (for an all-way stop), or with approach/turn movement capacity exceeded (for a side street stop controlled intersection) | $> 50.0$                                    |

Source: 2000 Highway Capacity Manual (Transportation Research Board).

Table 3

**INTERSECTION LEVEL OF SERVICE****HARVEST THURSDAY AM PEAK HOUR**

| INTERSECTION                                                     | EXISTING              | EXISTING<br>+<br>PROJECT | YEAR 2018                    |                 | YEAR 2035      |                 |
|------------------------------------------------------------------|-----------------------|--------------------------|------------------------------|-----------------|----------------|-----------------|
|                                                                  |                       |                          | W/O<br>PROJECT               | WITH<br>PROJECT | W/O<br>PROJECT | WITH<br>PROJECT |
| Pratt Avenue/<br>S.R. 29-128<br>(side street stop<br>controlled) | D-30.3 <sup>(1)</sup> | D-30.5                   | E-35.9/F-64.0 <sup>(2)</sup> | E-35.1/F-64.9   | F-87.1/F-*     | F-83.6/F-*      |
| Pratt Avenue/<br>S.R. 29-128<br>(signalized)                     | A-5.9 <sup>(3)</sup>  | A-5.9                    | A-8.5                        | A-8.5           | B-13.0         | B-13.1          |

**HARVEST THURSDAY PM PEAK HOUR**

| INTERSECTION                                                     | EXISTING              | EXISTING<br>+<br>PROJECT | YEAR 2018                    |                 | YEAR 2035      |                 |
|------------------------------------------------------------------|-----------------------|--------------------------|------------------------------|-----------------|----------------|-----------------|
|                                                                  |                       |                          | W/O<br>PROJECT               | WITH<br>PROJECT | W/O<br>PROJECT | WITH<br>PROJECT |
| Pratt Avenue/<br>S.R. 29-128<br>(side street stop<br>controlled) | E-39.3 <sup>(1)</sup> | E-39.6                   | E-36.4/F-93.4 <sup>(2)</sup> | E-35.4/F-94.4   | F-92.1/F-*     | F-88.3/F-*      |
| Pratt Avenue/<br>S.R. 29-128<br>(signalized)                     | A-7.5 <sup>(3)</sup>  | A-7.6                    | A-9.0                        | A-9.0           | C-21.8         | C-22.9          |

F-\* = Extreme delay (over 120 seconds) .

<sup>(1)</sup> Side street stop sign controlled level of service – control delay in seconds – Westbound Pratt Avenue<sup>(2)</sup> Side street stop sign controlled level of service – control delay in seconds –Eastbound Las Alcobas Hotel Driveway/ Westbound Pratt Avenue<sup>(3)</sup> Signalized lever of service – control delay in seconds

Year 2010 Highway Capacity Manual (HCM) Analysis Methodology

Source: Crane Transportation Group

Table 4A

# **INTERSECTION 8-HOUR SIGNAL WARRANT EVALUATION**

**DO VOLUMES DURING THE 8 HIGHEST TRAFFIC  
HOURS MEET SIGNAL WARRANT #1 CRITERIA LEVELS?**  
(See Urban Warrant Tables in Appendix)

## **AM PEAK HOUR**

|                         | EXISTING       |              | 2018           |              | 2035 (1)       |              |
|-------------------------|----------------|--------------|----------------|--------------|----------------|--------------|
|                         | W/O<br>PROJECT | +<br>PROJECT | W/O<br>PROJECT | +<br>PROJECT | W/O<br>PROJECT | +<br>PROJECT |
| INTERSECTION            |                |              |                |              |                |              |
| S.R.29-128/Pratt Avenue | No             | No           | No             | No           | No             | No           |

## **PM PEAK HOUR**

|                         | EXISTING       |              | 2018           |              | 2035 (1)       |              |
|-------------------------|----------------|--------------|----------------|--------------|----------------|--------------|
|                         | W/O<br>PROJECT | +<br>PROJECT | W/O<br>PROJECT | +<br>PROJECT | W/O<br>PROJECT | +<br>PROJECT |
| INTERSECTION            |                |              |                |              |                |              |
| S.R.29-128/Pratt Avenue | No             | No           | No             | No           | No             | No           |

(1) By 2035, the warrant level is approaching being met, as volumes for 6 of the 8 hours meet the warrant criteria. See the warrant tables in the Appendix.

Source: Crane Transportation Group

Table 4B

## INTERSECTION PEAK HOUR SIGNAL WARRANT EVALUATION

### DO PEAK HOUR VOLUMES MEET SIGNAL WARRANT #3 CRITERIA LEVELS? (See Warrant Figures in Appendix)

#### AM PEAK HOUR

|                         | EXISTING    |           | 2018        |           | 2035 (1)    |           |
|-------------------------|-------------|-----------|-------------|-----------|-------------|-----------|
|                         | W/O PROJECT | + PROJECT | W/O PROJECT | + PROJECT | W/O PROJECT | + PROJECT |
| INTERSECTION            |             |           |             |           |             |           |
| S.R.29-128/Pratt Avenue | No          | No        | No          | No        | No          | No        |

#### PM PEAK HOUR

|                         | EXISTING    |           | 2018        |           | 2035 (1)    |           |
|-------------------------|-------------|-----------|-------------|-----------|-------------|-----------|
|                         | W/O PROJECT | + PROJECT | W/O PROJECT | + PROJECT | W/O PROJECT | + PROJECT |
| INTERSECTION            |             |           |             |           |             |           |
| S.R.29-128/Pratt Avenue | No          | No        | No          | No        | No          | No        |

(1) By 2035, the warrant is approaching being met. See the warrant charts in the Appendix.

Source: Crane Transportation Group

**Table 5**

**HOURLY PARKING AT VINEYARD LODGE THURSDAY MAY 12, 2016**

| <b>TIME</b> | <b>TOTAL CARS<br/>PARKED IN<br/>FRONT LOT</b> |
|-------------|-----------------------------------------------|
| 7:00 AM     | 42                                            |
| 8:00        | 42                                            |
| 9:00        | 37                                            |
| 10:00       | 35                                            |
| 11:00       | 34                                            |
| 12:00 NOON  | 31                                            |
| 1:00 PM     | 32                                            |
| 2:00        | 34                                            |
| 3:00        | 34                                            |
| 4:00        | 35                                            |
| 5:00        | 33                                            |
| 6:00        | 32                                            |

*Source: Crane Transportation Group*

## **APPENDIX**

**INTERSECTION LEVEL OF SERVICE (LOS)  
WORKSHEETS**



HCM 2010 TWSC  
4: SR29 & Pratt Ave

22/06/2016

| Intersection             |        |        |        |      |        |      |
|--------------------------|--------|--------|--------|------|--------|------|
| Int Delay, s/veh         | 1.6    |        |        |      |        |      |
| Movement                 | WBL    | WBR    | NBT    | NBR  | SBL    | SBT  |
| Vol, veh/h               | 40     | 26     | 516    | 56   | 15     | 704  |
| Conflicting Peds, #/hr   | 5      | 5      | 0      | 0    | 0      | 0    |
| Sign Control             | Stop   | Stop   | Free   | Free | Free   | Free |
| RT Channelized           | -      | None   | -      | None | -      | None |
| Storage Length           | 0      | -      | -      | -    | 70     | -    |
| Veh in Median Storage, # | 0      | -      | 0      | -    | -      | 0    |
| Grade, %                 | 0      | -      | 0      | -    | -      | 0    |
| Peak Hour Factor         | 92     | 92     | 92     | 92   | 92     | 92   |
| Heavy Vehicles, %        | 0      | 0      | 8      | 0    | 0      | 6    |
| Mvmt Flow                | 43     | 28     | 561    | 61   | 16     | 765  |
| Major/Minor              | Minor1 |        | Major1 |      | Major2 |      |
| Conflicting Flow All     | 1394   | 596    | 0      | 0    | 627    | 0    |
| Stage 1                  | 596    | -      | -      | -    | -      | -    |
| Stage 2                  | 798    | -      | -      | -    | -      | -    |
| Critical Hdwy            | 6.4    | 6.2    | -      | -    | 4.1    | -    |
| Critical Hdwy Stg 1      | 5.4    | -      | -      | -    | -      | -    |
| Critical Hdwy Stg 2      | 5.4    | -      | -      | -    | -      | -    |
| Follow-up Hdwy           | 3.5    | 3.3    | -      | -    | 2.2    | -    |
| Pot Cap-1 Maneuver       | 158    | 507    | -      | -    | 965    | -    |
| Stage 1                  | 554    | -      | -      | -    | -      | -    |
| Stage 2                  | 447    | -      | -      | -    | -      | -    |
| Platoon blocked, %       |        |        | -      | -    |        | -    |
| Mov Cap-1 Maneuver       | 155    | 505    | -      | -    | 965    | -    |
| Mov Cap-2 Maneuver       | 155    | -      | -      | -    | -      | -    |
| Stage 1                  | 552    | -      | -      | -    | -      | -    |
| Stage 2                  | 440    | -      | -      | -    | -      | -    |
| Approach                 | WB     |        | NB     |      | SB     |      |
| HCM Control Delay, s     | 30.3   |        | 0      |      | 0.2    |      |
| HCM LOS                  | D      |        |        |      |        |      |
| Minor Lane/Major Mvmt    | NBT    | NBLn1  | SBL    | SBT  |        |      |
| Capacity (veh/h)         | -      | - 213  | 965    | -    |        |      |
| HCM Lane V/C Ratio       | -      | -0.337 | 0.017  | -    |        |      |
| HCM Control Delay (s)    | -      | - 30.3 | 8.8    | -    |        |      |
| HCM Lane LOS             | -      | - D    | A      | -    |        |      |
| HCM 95th %tile Q(veh)    | -      | - 1.4  | 0.1    | -    |        |      |

Existing AM Peak Hour  
without Project

Synchro 8 Report  
Page 1

HCM 2010 Signalized Intersection Summary  
4: SR29 & Pratt Ave

22/06/2016

|                                                                    |  |  |  |  |  |  |   |      |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---|------|
| Movement                                                           | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |   |      |
| Lane Configurations                                                |  |                                                                                   |  |                                                                                   |  |  |   |      |
| Volume (veh/h)                                                     | 40                                                                                | 26                                                                                | 516                                                                               | 56                                                                                | 15                                                                                | 704                                                                               |   |      |
| Number                                                             | 3                                                                                 | 18                                                                                | 2                                                                                 | 12                                                                                | 1                                                                                 | 6                                                                                 |   |      |
| Initial Q (Qb), veh                                                | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 |   |      |
| Ped-Bike Adj(A_pbT)                                                | 1.00                                                                              | 0.95                                                                              |                                                                                   | 0.98                                                                              | 1.00                                                                              |                                                                                   |   |      |
| Parking Bus, Adj                                                   | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |   |      |
| Adj Sat Flow, veh/h/ln                                             | 1900                                                                              | 1900                                                                              | 1772                                                                              | 1900                                                                              | 1900                                                                              | 1792                                                                              |   |      |
| Adj Flow Rate, veh/h                                               | 43                                                                                | 28                                                                                | 561                                                                               | 61                                                                                | 16                                                                                | 765                                                                               |   |      |
| Adj No. of Lanes                                                   | 0                                                                                 | 0                                                                                 | 1                                                                                 | 0                                                                                 | 1                                                                                 | 1                                                                                 |   |      |
| Peak Hour Factor                                                   | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              |   |      |
| Percent Heavy Veh, %                                               | 0                                                                                 | 0                                                                                 | 8                                                                                 | 8                                                                                 | 0                                                                                 | 6                                                                                 |   |      |
| Cap, veh/h                                                         | 68                                                                                | 44                                                                                | 797                                                                               | 87                                                                                | 30                                                                                | 1185                                                                              |   |      |
| Arrive On Green                                                    | 0.07                                                                              | 0.07                                                                              | 0.51                                                                              | 0.51                                                                              | 0.02                                                                              | 0.66                                                                              |   |      |
| Sat Flow, veh/h                                                    | 1010                                                                              | 658                                                                               | 1567                                                                              | 170                                                                               | 1810                                                                              | 1792                                                                              |   |      |
| Grp Volume(v), veh/h                                               | 72                                                                                | 0                                                                                 | 0                                                                                 | 622                                                                               | 16                                                                                | 765                                                                               |   |      |
| Grp Sat Flow(s),veh/h/ln                                           | 1691                                                                              | 0                                                                                 | 0                                                                                 | 1737                                                                              | 1810                                                                              | 1792                                                                              |   |      |
| Q Serve(g_s), s                                                    | 1.2                                                                               | 0.0                                                                               | 0.0                                                                               | 8.1                                                                               | 0.3                                                                               | 7.4                                                                               |   |      |
| Cycle Q Clear(g_c), s                                              | 1.2                                                                               | 0.0                                                                               | 0.0                                                                               | 8.1                                                                               | 0.3                                                                               | 7.4                                                                               |   |      |
| Prop In Lane                                                       | 0.60                                                                              | 0.39                                                                              |                                                                                   | 0.10                                                                              | 1.00                                                                              |                                                                                   |   |      |
| Lane Grp Cap(c), veh/h                                             | 113                                                                               | 0                                                                                 | 0                                                                                 | 883                                                                               | 30                                                                                | 1185                                                                              |   |      |
| V/C Ratio(X)                                                       | 0.64                                                                              | 0.00                                                                              | 0.00                                                                              | 0.70                                                                              | 0.53                                                                              | 0.65                                                                              |   |      |
| Avail Cap(c_a), veh/h                                              | 633                                                                               | 0                                                                                 | 0                                                                                 | 1358                                                                              | 246                                                                               | 1889                                                                              |   |      |
| HCM Platoon Ratio                                                  | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |   |      |
| Upstream Filter(I)                                                 | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |   |      |
| Uniform Delay (d), s/veh                                           | 13.4                                                                              | 0.0                                                                               | 0.0                                                                               | 5.5                                                                               | 14.3                                                                              | 2.9                                                                               |   |      |
| Incr Delay (d2), s/veh                                             | 5.8                                                                               | 0.0                                                                               | 0.0                                                                               | 1.0                                                                               | 13.7                                                                              | 0.6                                                                               |   |      |
| Initial Q Delay(d3),s/veh                                          | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |   |      |
| %ile BackOfQ(50%),veh/ln                                           | 0.7                                                                               | 0.0                                                                               | 0.0                                                                               | 4.1                                                                               | 0.2                                                                               | 3.6                                                                               |   |      |
| LnGrp Delay(d),s/veh                                               | 19.2                                                                              | 0.0                                                                               | 0.0                                                                               | 6.6                                                                               | 28.0                                                                              | 3.5                                                                               |   |      |
| LnGrp LOS                                                          | B                                                                                 |                                                                                   |                                                                                   | A                                                                                 | C                                                                                 | A                                                                                 |   |      |
| Approach Vol, veh/h                                                | 72                                                                                |                                                                                   | 622                                                                               |                                                                                   |                                                                                   | 781                                                                               |   |      |
| Approach Delay, s/veh                                              | 19.2                                                                              |                                                                                   | 6.6                                                                               |                                                                                   |                                                                                   | 4.0                                                                               |   |      |
| Approach LOS                                                       | B                                                                                 |                                                                                   | A                                                                                 |                                                                                   |                                                                                   | A                                                                                 |   |      |
| Timer                                                              | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7 | 8    |
| Assigned Phs                                                       | 1                                                                                 | 2                                                                                 |                                                                                   |                                                                                   |                                                                                   | 6                                                                                 |   | 8    |
| Phs Duration (G+Y+Rc), s                                           | 4.5                                                                               | 19.0                                                                              |                                                                                   |                                                                                   |                                                                                   | 23.4                                                                              |   | 6.0  |
| Change Period (Y+Rc), s                                            | 4.0                                                                               | 4.0                                                                               |                                                                                   |                                                                                   |                                                                                   | 4.0                                                                               |   | 4.0  |
| Max Green Setting (Gmax),s                                         | 4.0                                                                               | 23.0                                                                              |                                                                                   |                                                                                   |                                                                                   | 31.0                                                                              |   | 11.0 |
| Max Q Clear Time (g_c+I1),s                                        | 2.8                                                                               | 10.1                                                                              |                                                                                   |                                                                                   |                                                                                   | 9.4                                                                               |   | 3.2  |
| Green Ext Time (p_c), s                                            | 0.0                                                                               | 4.9                                                                               |                                                                                   |                                                                                   |                                                                                   | 6.0                                                                               |   | 0.1  |
| Intersection Summary                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |      |
| HCM 2010 Ctrl Delay                                                |                                                                                   |                                                                                   | 5.9                                                                               |                                                                                   |                                                                                   |                                                                                   |   |      |
| HCM 2010 LOS                                                       |                                                                                   |                                                                                   | A                                                                                 |                                                                                   |                                                                                   |                                                                                   |   |      |
| Notes                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |      |
| User approved pedestrian interval to be less than phase max green. |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |      |

Existing AM Peak Hour  
without Project

Synchro 8 Report  
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HCM 2010 Signalized Intersection Summary  
4: SR29 & Pratt Ave

22/06/2016

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User approved volume balancing among the lanes for turning movement.

HCM 2010 TWSC  
4: SR29 & Pratt Ave

05/11/2016

| Intersection             |        |      |        |       |        |      |
|--------------------------|--------|------|--------|-------|--------|------|
| Int Delay, s/veh         | 1.8    |      |        |       |        |      |
| Movement                 | WBL    | WBR  | NBT    | NBR   | SBL    | SBT  |
| Vol, veh/h               | 36     | 29   | 762    | 46    | 27     | 677  |
| Conflicting Peds, #/hr   | 5      | 5    | 0      | 0     | 0      | 0    |
| Sign Control             | Stop   | Stop | Free   | Free  | Free   | Free |
| RT Channelized           | -      | None | -      | None  | -      | None |
| Storage Length           | 0      | -    | -      | -     | 70     | -    |
| Veh in Median Storage, # | 0      | -    | 0      | -     | -      | 0    |
| Grade, %                 | 0      | -    | 0      | -     | -      | 0    |
| Peak Hour Factor         | 97     | 97   | 97     | 97    | 97     | 97   |
| Heavy Vehicles, %        | 0      | 0    | 2      | 0     | 0      | 2    |
| Mvmt Flow                | 37     | 30   | 786    | 47    | 28     | 698  |
| Major/Minor              | Minor1 |      | Major1 |       | Major2 |      |
| Conflicting Flow All     | 1568   | 814  | 0      | 0     | 838    | 0    |
| Stage 1                  | 814    | -    | -      | -     | -      | -    |
| Stage 2                  | 754    | -    | -      | -     | -      | -    |
| Critical Hdwy            | 6.4    | 6.2  | -      | -     | 4.1    | -    |
| Critical Hdwy Stg 1      | 5.4    | -    | -      | -     | -      | -    |
| Critical Hdwy Stg 2      | 5.4    | -    | -      | -     | -      | -    |
| Follow-up Hdwy           | 3.5    | 3.3  | -      | -     | 2.2    | -    |
| Pot Cap-1 Maneuver       | 123    | 381  | -      | -     | 805    | -    |
| Stage 1                  | 439    | -    | -      | -     | -      | -    |
| Stage 2                  | 468    | -    | -      | -     | -      | -    |
| Platoon blocked, %       |        |      | -      | -     |        | -    |
| Mov Cap-1 Maneuver       | 118    | 379  | -      | -     | 805    | -    |
| Mov Cap-2 Maneuver       | 118    | -    | -      | -     | -      | -    |
| Stage 1                  | 437    | -    | -      | -     | -      | -    |
| Stage 2                  | 452    | -    | -      | -     | -      | -    |
| Approach                 | WB     |      | NB     |       | SB     |      |
| HCM Control Delay, s     | 39.3   |      | 0      |       | 0.4    |      |
| HCM LOS                  | E      |      |        |       |        |      |
| Minor Lane/Major Mvmt    | NBT    | NBR  | WBLn1  | SBL   | SBT    |      |
| Capacity (veh/h)         | -      | -    | 170    | 805   | -      |      |
| HCM Lane V/C Ratio       | -      | -    | 0.394  | 0.035 | -      |      |
| HCM Control Delay (s)    | -      | -    | 39.3   | 9.6   | -      |      |
| HCM Lane LOS             | -      | -    | E      | A     | -      |      |
| HCM 95th %tile Q(veh)    | -      | -    | 1.7    | 0.1   | -      |      |

Existing PM Peak Hour  
without Project

Synchro 8 Report  
Page 1

HCM 2010 Signalized Intersection Summary  
4: SR29 & Pratt Ave

22/06/2016

|                                                                    |  |  |  |  |  |  |   |      |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---|------|
| Movement                                                           | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |   |      |
| Lane Configurations                                                |  |                                                                                   |  |                                                                                   |  |  |   |      |
| Volume (veh/h)                                                     | 36                                                                                | 29                                                                                | 762                                                                               | 46                                                                                | 27                                                                                | 677                                                                               |   |      |
| Number                                                             | 3                                                                                 | 18                                                                                | 2                                                                                 | 12                                                                                | 1                                                                                 | 6                                                                                 |   |      |
| Initial Q (Qb), veh                                                | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 |   |      |
| Ped-Bike Adj(A_pbT)                                                | 1.00                                                                              | 0.94                                                                              |                                                                                   | 0.98                                                                              | 1.00                                                                              |                                                                                   |   |      |
| Parking Bus, Adj                                                   | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |   |      |
| Adj Sat Flow, veh/h/ln                                             | 1900                                                                              | 1900                                                                              | 1865                                                                              | 1900                                                                              | 1900                                                                              | 1863                                                                              |   |      |
| Adj Flow Rate, veh/h                                               | 37                                                                                | 30                                                                                | 786                                                                               | 47                                                                                | 28                                                                                | 698                                                                               |   |      |
| Adj No. of Lanes                                                   | 0                                                                                 | 0                                                                                 | 1                                                                                 | 0                                                                                 | 1                                                                                 | 1                                                                                 |   |      |
| Peak Hour Factor                                                   | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              |   |      |
| Percent Heavy Veh, %                                               | 0                                                                                 | 0                                                                                 | 2                                                                                 | 2                                                                                 | 0                                                                                 | 2                                                                                 |   |      |
| Cap, veh/h                                                         | 57                                                                                | 46                                                                                | 966                                                                               | 58                                                                                | 50                                                                                | 1306                                                                              |   |      |
| Arrive On Green                                                    | 0.06                                                                              | 0.06                                                                              | 0.56                                                                              | 0.56                                                                              | 0.03                                                                              | 0.70                                                                              |   |      |
| Sat Flow, veh/h                                                    | 910                                                                               | 738                                                                               | 1740                                                                              | 104                                                                               | 1810                                                                              | 1863                                                                              |   |      |
| Grp Volume(v), veh/h                                               | 68                                                                                | 0                                                                                 | 0                                                                                 | 833                                                                               | 28                                                                                | 698                                                                               |   |      |
| Grp Sat Flow(s),veh/h/ln                                           | 1673                                                                              | 0                                                                                 | 0                                                                                 | 1844                                                                              | 1810                                                                              | 1863                                                                              |   |      |
| Q Serve(g_s), s                                                    | 1.3                                                                               | 0.0                                                                               | 0.0                                                                               | 12.4                                                                              | 0.5                                                                               | 6.1                                                                               |   |      |
| Cycle Q Clear(g_c), s                                              | 1.3                                                                               | 0.0                                                                               | 0.0                                                                               | 12.4                                                                              | 0.5                                                                               | 6.1                                                                               |   |      |
| Prop In Lane                                                       | 0.54                                                                              | 0.44                                                                              |                                                                                   | 0.06                                                                              | 1.00                                                                              |                                                                                   |   |      |
| Lane Grp Cap(c), veh/h                                             | 104                                                                               | 0                                                                                 | 0                                                                                 | 1023                                                                              | 50                                                                                | 1306                                                                              |   |      |
| V/C Ratio(X)                                                       | 0.65                                                                              | 0.00                                                                              | 0.00                                                                              | 0.81                                                                              | 0.57                                                                              | 0.53                                                                              |   |      |
| Avail Cap(c_a), veh/h                                              | 545                                                                               | 0                                                                                 | 0                                                                                 | 1255                                                                              | 214                                                                               | 1709                                                                              |   |      |
| HCM Platoon Ratio                                                  | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |   |      |
| Upstream Filter(I)                                                 | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |   |      |
| Uniform Delay (d), s/veh                                           | 15.5                                                                              | 0.0                                                                               | 0.0                                                                               | 6.1                                                                               | 16.2                                                                              | 2.4                                                                               |   |      |
| Incr Delay (d2), s/veh                                             | 6.7                                                                               | 0.0                                                                               | 0.0                                                                               | 3.5                                                                               | 9.7                                                                               | 0.3                                                                               |   |      |
| Initial Q Delay(d3),s/veh                                          | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |   |      |
| %ile BackOfQ(50%),veh/ln                                           | 0.8                                                                               | 0.0                                                                               | 0.0                                                                               | 7.0                                                                               | 0.4                                                                               | 3.0                                                                               |   |      |
| LnGrp Delay(d),s/veh                                               | 22.2                                                                              | 0.0                                                                               | 0.0                                                                               | 9.6                                                                               | 26.0                                                                              | 2.8                                                                               |   |      |
| LnGrp LOS                                                          | C                                                                                 |                                                                                   |                                                                                   | A                                                                                 | C                                                                                 | A                                                                                 |   |      |
| Approach Vol, veh/h                                                | 68                                                                                |                                                                                   | 833                                                                               |                                                                                   |                                                                                   | 726                                                                               |   |      |
| Approach Delay, s/veh                                              | 22.2                                                                              |                                                                                   | 9.6                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |   |      |
| Approach LOS                                                       | C                                                                                 |                                                                                   | A                                                                                 |                                                                                   |                                                                                   | A                                                                                 |   |      |
| Timer                                                              | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7 | 8    |
| Assigned Phs                                                       | 1                                                                                 | 2                                                                                 |                                                                                   |                                                                                   |                                                                                   | 6                                                                                 |   | 8    |
| Phs Duration (G+Y+Rc), s                                           | 4.9                                                                               | 22.8                                                                              |                                                                                   |                                                                                   |                                                                                   | 27.7                                                                              |   | 6.1  |
| Change Period (Y+Rc), s                                            | 4.0                                                                               | 4.0                                                                               |                                                                                   |                                                                                   |                                                                                   | 4.0                                                                               |   | 4.0  |
| Max Green Setting (Gmax),s                                         | 4.0                                                                               | 23.0                                                                              |                                                                                   |                                                                                   |                                                                                   | 31.0                                                                              |   | 11.0 |
| Max Q Clear Time (g_c+I1),s                                        | 4.5                                                                               | 14.4                                                                              |                                                                                   |                                                                                   |                                                                                   | 8.1                                                                               |   | 3.3  |
| Green Ext Time (p_c), s                                            | 0.0                                                                               | 4.4                                                                               |                                                                                   |                                                                                   |                                                                                   | 7.1                                                                               |   | 0.1  |
| Intersection Summary                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |      |
| HCM 2010 Ctrl Delay                                                |                                                                                   |                                                                                   | 7.5                                                                               |                                                                                   |                                                                                   |                                                                                   |   |      |
| HCM 2010 LOS                                                       |                                                                                   |                                                                                   | A                                                                                 |                                                                                   |                                                                                   |                                                                                   |   |      |
| Notes                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |      |
| User approved pedestrian interval to be less than phase max green. |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |      |

Existing PM Peak Hour  
with Signal

Synchro 8 Report  
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HCM 2010 Signalized Intersection Summary  
4: SR29 & Pratt Ave

22/06/2016

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User approved volume balancing among the lanes for turning movement.

HCM Unsignalized Intersection Capacity Analysis  
4: SR29 & Pratt Ave

25/10/2016

|                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
|                                   |  |  |  |  |  |  |
| Movement                          | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations               |  |                                                                                   |  |                                                                                   |  |  |
| Volume (veh/h)                    | 43                                                                                | 27                                                                                | 502                                                                               | 56                                                                                | 15                                                                                | 702                                                                               |
| Sign Control                      | Stop                                                                              |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |
| Grade                             | 0%                                                                                |                                                                                   | 0%                                                                                |                                                                                   |                                                                                   | 0%                                                                                |
| Peak Hour Factor                  | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              |
| Hourly flow rate (vph)            | 47                                                                                | 29                                                                                | 546                                                                               | 61                                                                                | 16                                                                                | 763                                                                               |
| Pedestrians                       |                                                                                   |                                                                                   | 5                                                                                 |                                                                                   |                                                                                   | 5                                                                                 |
| Lane Width (ft)                   |                                                                                   |                                                                                   | 12.0                                                                              |                                                                                   |                                                                                   | 12.0                                                                              |
| Walking Speed (ft/s)              |                                                                                   |                                                                                   | 4.0                                                                               |                                                                                   |                                                                                   | 4.0                                                                               |
| Percent Blockage                  |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |
| Right turn flare (veh)            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Median type                       |                                                                                   |                                                                                   | None                                                                              |                                                                                   |                                                                                   | None                                                                              |
| Median storage (veh)              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Upstream signal (ft)              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| pX, platoon unblocked             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| vC, conflicting volume            | 1377                                                                              | 581                                                                               |                                                                                   |                                                                                   | 607                                                                               |                                                                                   |
| vC1, stage 1 conf vol             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| vC2, stage 2 conf vol             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| vCu, unblocked vol                | 1377                                                                              | 581                                                                               |                                                                                   |                                                                                   | 607                                                                               |                                                                                   |
| tC, single (s)                    | 6.4                                                                               | 6.2                                                                               |                                                                                   |                                                                                   | 4.1                                                                               |                                                                                   |
| tC, 2 stage (s)                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| tF (s)                            | 3.5                                                                               | 3.3                                                                               |                                                                                   |                                                                                   | 2.2                                                                               |                                                                                   |
| p0 queue free %                   | 70                                                                                | 94                                                                                |                                                                                   |                                                                                   | 98                                                                                |                                                                                   |
| cM capacity (veh/h)               | 158                                                                               | 515                                                                               |                                                                                   |                                                                                   | 981                                                                               |                                                                                   |
| Direction, Lane #                 | WB 1                                                                              | NB 1                                                                              | SB 1                                                                              | SB 2                                                                              |                                                                                   |                                                                                   |
| Volume Total                      | 76                                                                                | 607                                                                               | 16                                                                                | 763                                                                               |                                                                                   |                                                                                   |
| Volume Left                       | 47                                                                                | 0                                                                                 | 16                                                                                | 0                                                                                 |                                                                                   |                                                                                   |
| Volume Right                      | 29                                                                                | 61                                                                                | 0                                                                                 | 0                                                                                 |                                                                                   |                                                                                   |
| cSH                               | 216                                                                               | 1700                                                                              | 981                                                                               | 1700                                                                              |                                                                                   |                                                                                   |
| Volume to Capacity                | 0.35                                                                              | 0.36                                                                              | 0.02                                                                              | 0.45                                                                              |                                                                                   |                                                                                   |
| Queue Length 95th (ft)            | 39                                                                                | 0                                                                                 | 1                                                                                 | 0                                                                                 |                                                                                   |                                                                                   |
| Control Delay (s)                 | 30.5                                                                              | 0.0                                                                               | 8.7                                                                               | 0.0                                                                               |                                                                                   |                                                                                   |
| Lane LOS                          | D                                                                                 |                                                                                   | A                                                                                 |                                                                                   |                                                                                   |                                                                                   |
| Approach Delay (s)                | 30.5                                                                              | 0.0                                                                               | 0.2                                                                               |                                                                                   |                                                                                   |                                                                                   |
| Approach LOS                      | D                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Intersection Summary              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Average Delay                     |                                                                                   | 1.7                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Intersection Capacity Utilization |                                                                                   | 49.3%                                                                             |                                                                                   | ICU Level of Service                                                              | A                                                                                 |                                                                                   |
| Analysis Period (min)             |                                                                                   | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

Existing AM Peak Hour  
with Project

without signal  
Existing AM with Project.syn



HCM 2010 Signalized Intersection Summary  
4: SR29 & Pratt Ave

17/10/2016

|                                                                    |  |  |  |  |  |  |   |      |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---|------|
| Movement                                                           | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |   |      |
| Lane Configurations                                                |  |                                                                                   |  |                                                                                   |  |  |   |      |
| Volume (veh/h)                                                     | 43                                                                                | 27                                                                                | 502                                                                               | 56                                                                                | 15                                                                                | 702                                                                               |   |      |
| Number                                                             | 3                                                                                 | 18                                                                                | 2                                                                                 | 12                                                                                | 1                                                                                 | 6                                                                                 |   |      |
| Initial Q (Qb), veh                                                | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 |   |      |
| Ped-Bike Adj(A_pbT)                                                | 1.00                                                                              | 0.95                                                                              |                                                                                   | 0.98                                                                              | 1.00                                                                              |                                                                                   |   |      |
| Parking Bus, Adj                                                   | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |   |      |
| Adj Sat Flow, veh/h/ln                                             | 1900                                                                              | 1900                                                                              | 1772                                                                              | 1900                                                                              | 1900                                                                              | 1792                                                                              |   |      |
| Adj Flow Rate, veh/h                                               | 47                                                                                | 29                                                                                | 546                                                                               | 61                                                                                | 16                                                                                | 763                                                                               |   |      |
| Adj No. of Lanes                                                   | 0                                                                                 | 0                                                                                 | 1                                                                                 | 0                                                                                 | 1                                                                                 | 1                                                                                 |   |      |
| Peak Hour Factor                                                   | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              |   |      |
| Percent Heavy Veh, %                                               | 0                                                                                 | 0                                                                                 | 8                                                                                 | 8                                                                                 | 0                                                                                 | 6                                                                                 |   |      |
| Cap, veh/h                                                         | 72                                                                                | 45                                                                                | 785                                                                               | 88                                                                                | 30                                                                                | 1176                                                                              |   |      |
| Arrive On Green                                                    | 0.07                                                                              | 0.07                                                                              | 0.50                                                                              | 0.50                                                                              | 0.02                                                                              | 0.66                                                                              |   |      |
| Sat Flow, veh/h                                                    | 1035                                                                              | 638                                                                               | 1562                                                                              | 175                                                                               | 1810                                                                              | 1792                                                                              |   |      |
| Grp Volume(v), veh/h                                               | 77                                                                                | 0                                                                                 | 0                                                                                 | 607                                                                               | 16                                                                                | 763                                                                               |   |      |
| Grp Sat Flow(s),veh/h/ln                                           | 1695                                                                              | 0                                                                                 | 0                                                                                 | 1737                                                                              | 1810                                                                              | 1792                                                                              |   |      |
| Q Serve(g_s), s                                                    | 1.3                                                                               | 0.0                                                                               | 0.0                                                                               | 7.8                                                                               | 0.3                                                                               | 7.4                                                                               |   |      |
| Cycle Q Clear(g_c), s                                              | 1.3                                                                               | 0.0                                                                               | 0.0                                                                               | 7.8                                                                               | 0.3                                                                               | 7.4                                                                               |   |      |
| Prop In Lane                                                       | 0.61                                                                              | 0.38                                                                              |                                                                                   | 0.10                                                                              | 1.00                                                                              |                                                                                   |   |      |
| Lane Grp Cap(c), veh/h                                             | 119                                                                               | 0                                                                                 | 0                                                                                 | 873                                                                               | 30                                                                                | 1176                                                                              |   |      |
| V/C Ratio(X)                                                       | 0.65                                                                              | 0.00                                                                              | 0.00                                                                              | 0.70                                                                              | 0.53                                                                              | 0.65                                                                              |   |      |
| Avail Cap(c_a), veh/h                                              | 638                                                                               | 0                                                                                 | 0                                                                                 | 1368                                                                              | 248                                                                               | 1903                                                                              |   |      |
| HCM Platoon Ratio                                                  | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |   |      |
| Upstream Filter(I)                                                 | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |   |      |
| Uniform Delay (d), s/veh                                           | 13.2                                                                              | 0.0                                                                               | 0.0                                                                               | 5.6                                                                               | 14.2                                                                              | 3.0                                                                               |   |      |
| Incr Delay (d2), s/veh                                             | 5.8                                                                               | 0.0                                                                               | 0.0                                                                               | 1.0                                                                               | 13.7                                                                              | 0.6                                                                               |   |      |
| Initial Q Delay(d3),s/veh                                          | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |   |      |
| %ile BackOfQ(50%),veh/ln                                           | 0.8                                                                               | 0.0                                                                               | 0.0                                                                               | 3.8                                                                               | 0.2                                                                               | 3.6                                                                               |   |      |
| LnGrp Delay(d),s/veh                                               | 19.1                                                                              | 0.0                                                                               | 0.0                                                                               | 6.6                                                                               | 27.9                                                                              | 3.6                                                                               |   |      |
| LnGrp LOS                                                          | B                                                                                 |                                                                                   |                                                                                   | A                                                                                 | C                                                                                 | A                                                                                 |   |      |
| Approach Vol, veh/h                                                | 77                                                                                |                                                                                   | 607                                                                               |                                                                                   |                                                                                   | 779                                                                               |   |      |
| Approach Delay, s/veh                                              | 19.1                                                                              |                                                                                   | 6.6                                                                               |                                                                                   |                                                                                   | 4.1                                                                               |   |      |
| Approach LOS                                                       | B                                                                                 |                                                                                   | A                                                                                 |                                                                                   |                                                                                   | A                                                                                 |   |      |
| Timer                                                              | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7 | 8    |
| Assigned Phs                                                       | 1                                                                                 | 2                                                                                 |                                                                                   |                                                                                   |                                                                                   | 6                                                                                 |   | 8    |
| Phs Duration (G+Y+Rc), s                                           | 4.5                                                                               | 18.7                                                                              |                                                                                   |                                                                                   |                                                                                   | 23.2                                                                              |   | 6.0  |
| Change Period (Y+Rc), s                                            | 4.0                                                                               | 4.0                                                                               |                                                                                   |                                                                                   |                                                                                   | 4.0                                                                               |   | 4.0  |
| Max Green Setting (Gmax),s                                         | 4.0                                                                               | 23.0                                                                              |                                                                                   |                                                                                   |                                                                                   | 31.0                                                                              |   | 11.0 |
| Max Q Clear Time (g_c+I1),s                                        | 2.8                                                                               | 9.8                                                                               |                                                                                   |                                                                                   |                                                                                   | 9.4                                                                               |   | 3.3  |
| Green Ext Time (p_c), s                                            | 0.0                                                                               | 4.9                                                                               |                                                                                   |                                                                                   |                                                                                   | 5.9                                                                               |   | 0.1  |
| Intersection Summary                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |      |
| HCM 2010 Ctrl Delay                                                |                                                                                   |                                                                                   | 5.9                                                                               |                                                                                   |                                                                                   |                                                                                   |   |      |
| HCM 2010 LOS                                                       |                                                                                   |                                                                                   | A                                                                                 |                                                                                   |                                                                                   |                                                                                   |   |      |
| Notes                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |      |
| User approved pedestrian interval to be less than phase max green. |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |      |

Existing AM Peak Hour  
with Project

with signal  
Existing with project AM w-signal.syn

HCM 2010 Signalized Intersection Summary  
4: SR29 & Pratt Ave

17/10/2016

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User approved volume balancing among the lanes for turning movement.

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Existing AM Peak Hour  
with Project

with signal  
Existing with project AM w-signal.syn

HCM 2010 TWSC  
4: SR29 & Pratt Ave

17/10/2016

| Intersection             |        |      |        |       |        |      |
|--------------------------|--------|------|--------|-------|--------|------|
| Int Delay, s/veh         | 1.9    |      |        |       |        |      |
| Movement                 | WBL    | WBR  | NBT    | NBR   | SBL    | SBT  |
| Vol, veh/h               | 39     | 30   | 755    | 50    | 27     | 662  |
| Conflicting Peds, #/hr   | 5      | 5    | 0      | 0     | 0      | 0    |
| Sign Control             | Stop   | Stop | Free   | Free  | Free   | Free |
| RT Channelized           | -      | None | -      | None  | -      | None |
| Storage Length           | 0      | -    | -      | -     | 70     | -    |
| Veh in Median Storage, # | 0      | -    | 0      | -     | -      | 0    |
| Grade, %                 | 0      | -    | 0      | -     | -      | 0    |
| Peak Hour Factor         | 97     | 97   | 97     | 97    | 97     | 97   |
| Heavy Vehicles, %        | 0      | 0    | 2      | 0     | 0      | 2    |
| Mvmt Flow                | 40     | 31   | 778    | 52    | 28     | 682  |
| Major/Minor              | Minor1 |      | Major1 |       | Major2 |      |
| Conflicting Flow All     | 1547   | 809  | 0      | 0     | 835    | 0    |
| Stage 1                  | 809    | -    | -      | -     | -      | -    |
| Stage 2                  | 738    | -    | -      | -     | -      | -    |
| Critical Hdwy            | 6.4    | 6.2  | -      | -     | 4.1    | -    |
| Critical Hdwy Stg 1      | 5.4    | -    | -      | -     | -      | -    |
| Critical Hdwy Stg 2      | 5.4    | -    | -      | -     | -      | -    |
| Follow-up Hdwy           | 3.5    | 3.3  | -      | -     | 2.2    | -    |
| Pot Cap-1 Maneuver       | 127    | 384  | -      | -     | 807    | -    |
| Stage 1                  | 441    | -    | -      | -     | -      | -    |
| Stage 2                  | 476    | -    | -      | -     | -      | -    |
| Platoon blocked, %       |        |      | -      | -     |        | -    |
| Mov Cap-1 Maneuver       | 122    | 382  | -      | -     | 807    | -    |
| Mov Cap-2 Maneuver       | 122    | -    | -      | -     | -      | -    |
| Stage 1                  | 439    | -    | -      | -     | -      | -    |
| Stage 2                  | 459    | -    | -      | -     | -      | -    |
| Approach                 | WB     |      | NB     |       | SB     |      |
| HCM Control Delay, s     | 39.6   |      | 0      |       | 0.4    |      |
| HCM LOS                  | E      |      |        |       |        |      |
| Minor Lane/Major Mvmt    | NBT    | NBR  | WBLn1  | SBL   | SBT    |      |
| Capacity (veh/h)         | -      | -    | 173    | 807   | -      |      |
| HCM Lane V/C Ratio       | -      | -    | 0.411  | 0.034 | -      |      |
| HCM Control Delay (s)    | -      | -    | 39.6   | 9.6   | -      |      |
| HCM Lane LOS             | -      | -    | E      | A     | -      |      |
| HCM 95th %tile Q(veh)    | -      | -    | 1.8    | 0.1   | -      |      |

Existing PM Peak Hour  
with Project

without Signal  
Existing PM with project.syn

HCM 2010 Signalized Intersection Summary  
4: SR29 & Pratt Ave

17/10/2016

|                                                                    |  |  |  |  |  |  |   |      |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---|------|
| Movement                                                           | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |   |      |
| Lane Configurations                                                |  |                                                                                   |  |                                                                                   |  |  |   |      |
| Volume (veh/h)                                                     | 39                                                                                | 30                                                                                | 755                                                                               | 50                                                                                | 27                                                                                | 662                                                                               |   |      |
| Number                                                             | 3                                                                                 | 18                                                                                | 2                                                                                 | 12                                                                                | 1                                                                                 | 6                                                                                 |   |      |
| Initial Q (Qb), veh                                                | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 |   |      |
| Ped-Bike Adj(A_pbT)                                                | 1.00                                                                              | 0.94                                                                              |                                                                                   | 0.98                                                                              | 1.00                                                                              |                                                                                   |   |      |
| Parking Bus, Adj                                                   | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |   |      |
| Adj Sat Flow, veh/h/ln                                             | 1900                                                                              | 1900                                                                              | 1865                                                                              | 1900                                                                              | 1900                                                                              | 1863                                                                              |   |      |
| Adj Flow Rate, veh/h                                               | 40                                                                                | 31                                                                                | 778                                                                               | 52                                                                                | 28                                                                                | 682                                                                               |   |      |
| Adj No. of Lanes                                                   | 0                                                                                 | 0                                                                                 | 1                                                                                 | 0                                                                                 | 1                                                                                 | 1                                                                                 |   |      |
| Peak Hour Factor                                                   | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              |   |      |
| Percent Heavy Veh, %                                               | 0                                                                                 | 0                                                                                 | 2                                                                                 | 2                                                                                 | 0                                                                                 | 2                                                                                 |   |      |
| Cap, veh/h                                                         | 60                                                                                | 47                                                                                | 955                                                                               | 64                                                                                | 50                                                                                | 1302                                                                              |   |      |
| Arrive On Green                                                    | 0.06                                                                              | 0.06                                                                              | 0.55                                                                              | 0.55                                                                              | 0.03                                                                              | 0.70                                                                              |   |      |
| Sat Flow, veh/h                                                    | 931                                                                               | 722                                                                               | 1726                                                                              | 115                                                                               | 1810                                                                              | 1863                                                                              |   |      |
| Grp Volume(v), veh/h                                               | 72                                                                                | 0                                                                                 | 0                                                                                 | 830                                                                               | 28                                                                                | 682                                                                               |   |      |
| Grp Sat Flow(s),veh/h/ln                                           | 1676                                                                              | 0                                                                                 | 0                                                                                 | 1841                                                                              | 1810                                                                              | 1863                                                                              |   |      |
| Q Serve(g_s), s                                                    | 1.4                                                                               | 0.0                                                                               | 0.0                                                                               | 12.4                                                                              | 0.5                                                                               | 5.9                                                                               |   |      |
| Cycle Q Clear(g_c), s                                              | 1.4                                                                               | 0.0                                                                               | 0.0                                                                               | 12.4                                                                              | 0.5                                                                               | 5.9                                                                               |   |      |
| Prop In Lane                                                       | 0.56                                                                              | 0.43                                                                              |                                                                                   | 0.06                                                                              | 1.00                                                                              |                                                                                   |   |      |
| Lane Grp Cap(c), veh/h                                             | 108                                                                               | 0                                                                                 | 0                                                                                 | 1019                                                                              | 50                                                                                | 1302                                                                              |   |      |
| V/C Ratio(X)                                                       | 0.67                                                                              | 0.00                                                                              | 0.00                                                                              | 0.81                                                                              | 0.57                                                                              | 0.52                                                                              |   |      |
| Avail Cap(c_a), veh/h                                              | 545                                                                               | 0                                                                                 | 0                                                                                 | 1253                                                                              | 214                                                                               | 1708                                                                              |   |      |
| HCM Platoon Ratio                                                  | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |   |      |
| Upstream Filter(I)                                                 | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |   |      |
| Uniform Delay (d), s/veh                                           | 15.5                                                                              | 0.0                                                                               | 0.0                                                                               | 6.1                                                                               | 16.2                                                                              | 2.4                                                                               |   |      |
| Incr Delay (d2), s/veh                                             | 6.9                                                                               | 0.0                                                                               | 0.0                                                                               | 3.5                                                                               | 9.7                                                                               | 0.3                                                                               |   |      |
| Initial Q Delay(d3),s/veh                                          | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |   |      |
| %ile BackOfQ(50%),veh/ln                                           | 0.8                                                                               | 0.0                                                                               | 0.0                                                                               | 7.0                                                                               | 0.4                                                                               | 3.0                                                                               |   |      |
| LnGrp Delay(d),s/veh                                               | 22.3                                                                              | 0.0                                                                               | 0.0                                                                               | 9.7                                                                               | 26.0                                                                              | 2.7                                                                               |   |      |
| LnGrp LOS                                                          | C                                                                                 |                                                                                   |                                                                                   | A                                                                                 | C                                                                                 | A                                                                                 |   |      |
| Approach Vol, veh/h                                                | 72                                                                                |                                                                                   | 830                                                                               |                                                                                   |                                                                                   | 710                                                                               |   |      |
| Approach Delay, s/veh                                              | 22.3                                                                              |                                                                                   | 9.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |   |      |
| Approach LOS                                                       | C                                                                                 |                                                                                   | A                                                                                 |                                                                                   |                                                                                   | A                                                                                 |   |      |
| Timer                                                              | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7 | 8    |
| Assigned Phs                                                       | 1                                                                                 | 2                                                                                 |                                                                                   |                                                                                   |                                                                                   | 6                                                                                 |   | 8    |
| Phs Duration (G+Y+Rc), s                                           | 4.9                                                                               | 22.7                                                                              |                                                                                   |                                                                                   |                                                                                   | 27.6                                                                              |   | 6.2  |
| Change Period (Y+Rc), s                                            | 4.0                                                                               | 4.0                                                                               |                                                                                   |                                                                                   |                                                                                   | 4.0                                                                               |   | 4.0  |
| Max Green Setting (Gmax),s                                         | 40                                                                                | 23.0                                                                              |                                                                                   |                                                                                   |                                                                                   | 31.0                                                                              |   | 11.0 |
| Max Q Clear Time (g_c+I1),s                                        | 2.5                                                                               | 14.4                                                                              |                                                                                   |                                                                                   |                                                                                   | 7.9                                                                               |   | 3.4  |
| Green Ext Time (p_c), s                                            | 0.0                                                                               | 4.3                                                                               |                                                                                   |                                                                                   |                                                                                   | 7.0                                                                               |   | 0.1  |
| Intersection Summary                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |      |
| HCM 2010 Ctrl Delay                                                |                                                                                   |                                                                                   | 7.6                                                                               |                                                                                   |                                                                                   |                                                                                   |   |      |
| HCM 2010 LOS                                                       |                                                                                   |                                                                                   | A                                                                                 |                                                                                   |                                                                                   |                                                                                   |   |      |
| Notes                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |      |
| User approved pedestrian interval to be less than phase max green. |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |      |

Existing PM Peak Hour  
with Project

with signal  
Existing PM + project w-signal.syn

HCM 2010 Signalized Intersection Summary  
4: SR29 & Pratt Ave

17/10/2016

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User approved volume balancing among the lanes for turning movement.

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Existing PM Peak Hour  
with Project

with signal  
Existing PM + project w-signal.syn



HCM 2010 TWSC  
4: SR29 & Pratt Ave

04/11/2016

| Intersection             |        |      |      |        |       |       |        |      |      |        |      |      |
|--------------------------|--------|------|------|--------|-------|-------|--------|------|------|--------|------|------|
| Int Delay, s/veh         | 3.9    |      |      |        |       |       |        |      |      |        |      |      |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Movement                 | EBL    | EBT  | EBR  | WBL    | WBT   | WBR   | NBL    | NBT  | NBR  | SBL    | SBT  | SBR  |
| Vol, veh/h               | 8      | 3    | 8    | 42     | 4     | 27    | 17     | 537  | 70   | 16     | 732  | 7    |
| Conflicting Peds, #/hr   | 0      | 0    | 0    | 5      | 0     | 5     | 0      | 0    | 0    | 0      | 0    | 0    |
| Sign Control             | Stop   | Stop | Stop | Stop   | Stop  | Stop  | Free   | Free | Free | Free   | Free | Free |
| RT Channelized           | -      | -    | None | -      | -     | None  | -      | -    | None | -      | -    | None |
| Storage Length           | -      | -    | -    | -      | -     | -     | 0      | -    | -    | 70     | -    | -    |
| Veh in Median Storage, # | -      | 0    | -    | -      | 0     | -     | -      | 0    | -    | -      | 0    | -    |
| Grade, %                 | -      | 0    | -    | -      | 0     | -     | -      | 0    | -    | -      | 0    | -    |
| Peak Hour Factor         | 92     | 92   | 92   | 92     | 92    | 92    | 92     | 92   | 92   | 92     | 92   | 92   |
| Heavy Vehicles, %        | 0      | 0    | 0    | 0      | 0     | 0     | 0      | 8    | 0    | 0      | 6    | 0    |
| Mvmt Flow                | 9      | 3    | 9    | 46     | 4     | 29    | 18     | 584  | 76   | 17     | 796  | 8    |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Major/Minor              | Minor2 |      |      | Minor1 |       |       | Major1 |      |      | Major2 |      |      |
| Conflicting Flow All     | 1515   | 1536 | 799  | 1504   | 1502  | 627   | 803    | 0    | 0    | 665    | 0    | 0    |
| Stage 1                  | 834    | 834  | -    | 664    | 664   | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                  | 681    | 702  | -    | 840    | 838   | -     | -      | -    | -    | -      | -    | -    |
| Critical Hdwy            | 7.1    | 6.5  | 6.2  | 7.1    | 6.5   | 6.2   | 4.1    | -    | -    | 4.1    | -    | -    |
| Critical Hdwy Stg 1      | 6.1    | 5.5  | -    | 6.1    | 5.5   | -     | -      | -    | -    | -      | -    | -    |
| Critical Hdwy Stg 2      | 6.1    | 5.5  | -    | 6.1    | 5.5   | -     | -      | -    | -    | -      | -    | -    |
| Follow-up Hdwy           | 3.5    | 4    | 3.3  | 3.5    | 4     | 3.3   | 2.2    | -    | -    | 2.2    | -    | -    |
| Pot Cap-1 Maneuver       | 99     | 117  | 389  | 101    | 123   | 487   | 830    | -    | -    | 934    | -    | -    |
| Stage 1                  | 365    | 386  | -    | 453    | 461   | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                  | 444    | 443  | -    | 363    | 384   | -     | -      | -    | -    | -      | -    | -    |
| Platoon blocked, %       |        |      |      |        |       |       |        | -    | -    |        | -    | -    |
| Mov Cap-1 Maneuver       | 88     | 112  | 389  | 93     | 118   | 485   | 830    | -    | -    | 934    | -    | -    |
| Mov Cap-2 Maneuver       | 88     | 112  | -    | 93     | 118   | -     | -      | -    | -    | -      | -    | -    |
| Stage 1                  | 357    | 379  | -    | 441    | 449   | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                  | 404    | 432  | -    | 345    | 377   | -     | -      | -    | -    | -      | -    | -    |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Approach                 | EB     |      |      | WB     |       |       | NB     |      |      | SB     |      |      |
| HCM Control Delay, s     | 35.9   |      |      | 64     |       |       | 0.3    |      |      | 0.2    |      |      |
| HCM LOS                  | E      |      |      | F      |       |       |        |      |      |        |      |      |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT  | NBR  | EBLn1  | WBLn1 | SBL   | SBT    | SBR  |      |        |      |      |
| Capacity (veh/h)         | 830    | -    | -    | 137    | 135   | 934   | -      | -    |      |        |      |      |
| HCM Lane V/C Ratio       | 0.022  | -    | -    | 0.151  | 0.588 | 0.019 | -      | -    |      |        |      |      |
| HCM Control Delay (s)    | 9.4    | -    | -    | 35.9   | 64    | 8.9   | -      | -    |      |        |      |      |
| HCM Lane LOS             | A      | -    | -    | E      | F     | A     | -      | -    |      |        |      |      |
| HCM 95th %tile Q(veh)    | 0.1    | -    | -    | 0.5    | 3     | 0.1   | -      | -    |      |        |      |      |

2018 AM Peak Hour  
w-o Project

Synchro 8 Report  
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HCM 2010 Signalized Intersection Summary  
4: SR29 & Pratt Ave

25/10/2016

|                                                                    |  |  |  |  |  |  |   |  |  |  |  |  |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                                                           | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations                                                |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |  |  |                                                                                     |  |  |                                                                                     |
| Volume (veh/h)                                                     | 8                                                                                 | 3                                                                                 | 8                                                                                 | 42                                                                                | 4                                                                                 | 27                                                                                | 17                                                                                  | 537                                                                                 | 70                                                                                  | 16                                                                                  | 732                                                                                 | 7                                                                                   |
| Number                                                             | 7                                                                                 | 4                                                                                 | 14                                                                                | 3                                                                                 | 8                                                                                 | 18                                                                                | 5                                                                                   | 2                                                                                   | 12                                                                                  | 1                                                                                   | 6                                                                                   | 16                                                                                  |
| Initial Q (Qb), veh                                                | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ped-Bike Adj(A_pbT)                                                | 0.98                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 0.94                                                                              | 1.00                                                                                |                                                                                     | 0.98                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Parking Bus, Adj                                                   | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Adj Sat Flow, veh/h/ln                                             | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                                | 1774                                                                                | 1900                                                                                | 1900                                                                                | 1793                                                                                | 1900                                                                                |
| Adj Flow Rate, veh/h                                               | 9                                                                                 | 3                                                                                 | 9                                                                                 | 46                                                                                | 4                                                                                 | 29                                                                                | 18                                                                                  | 584                                                                                 | 76                                                                                  | 17                                                                                  | 796                                                                                 | 8                                                                                   |
| Adj No. of Lanes                                                   | 0                                                                                 | 1                                                                                 | 0                                                                                 | 0                                                                                 | 1                                                                                 | 0                                                                                 | 1                                                                                   | 1                                                                                   | 0                                                                                   | 1                                                                                   | 1                                                                                   | 0                                                                                   |
| Peak Hour Factor                                                   | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                |
| Percent Heavy Veh, %                                               | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 8                                                                                   | 8                                                                                   | 0                                                                                   | 6                                                                                   | 6                                                                                   |
| Cap, veh/h                                                         | 196                                                                               | 27                                                                                | 59                                                                                | 232                                                                               | 6                                                                                 | 45                                                                                | 33                                                                                  | 865                                                                                 | 113                                                                                 | 31                                                                                  | 998                                                                                 | 10                                                                                  |
| Arrive On Green                                                    | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.02                                                                                | 0.56                                                                                | 0.56                                                                                | 0.02                                                                                | 0.56                                                                                | 0.56                                                                                |
| Sat Flow, veh/h                                                    | 639                                                                               | 339                                                                               | 734                                                                               | 890                                                                               | 77                                                                                | 561                                                                               | 1810                                                                                | 1534                                                                                | 200                                                                                 | 1810                                                                                | 1773                                                                                | 18                                                                                  |
| Grp Volume(v), veh/h                                               | 21                                                                                | 0                                                                                 | 0                                                                                 | 79                                                                                | 0                                                                                 | 0                                                                                 | 18                                                                                  | 0                                                                                   | 660                                                                                 | 17                                                                                  | 0                                                                                   | 804                                                                                 |
| Grp Sat Flow(s),veh/h/ln                                           | 1712                                                                              | 0                                                                                 | 0                                                                                 | 1529                                                                              | 0                                                                                 | 0                                                                                 | 1810                                                                                | 0                                                                                   | 1734                                                                                | 1810                                                                                | 0                                                                                   | 1790                                                                                |
| Q Serve(g_s), s                                                    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 1.3                                                                               | 0.0                                                                               | 0.0                                                                               | 0.3                                                                                 | 0.0                                                                                 | 9.5                                                                                 | 0.3                                                                                 | 0.0                                                                                 | 12.6                                                                                |
| Cycle Q Clear(g_c), s                                              | 0.4                                                                               | 0.0                                                                               | 0.0                                                                               | 1.7                                                                               | 0.0                                                                               | 0.0                                                                               | 0.3                                                                                 | 0.0                                                                                 | 9.5                                                                                 | 0.3                                                                                 | 0.0                                                                                 | 12.6                                                                                |
| Prop In Lane                                                       | 0.43                                                                              |                                                                                   | 0.43                                                                              | 0.58                                                                              |                                                                                   | 0.37                                                                              | 1.00                                                                                |                                                                                     | 0.12                                                                                | 1.00                                                                                |                                                                                     | 0.01                                                                                |
| Lane Grp Cap(c), veh/h                                             | 282                                                                               | 0                                                                                 | 0                                                                                 | 283                                                                               | 0                                                                                 | 0                                                                                 | 33                                                                                  | 0                                                                                   | 978                                                                                 | 31                                                                                  | 0                                                                                   | 1008                                                                                |
| V/C Ratio(X)                                                       | 0.07                                                                              | 0.00                                                                              | 0.00                                                                              | 0.28                                                                              | 0.00                                                                              | 0.00                                                                              | 0.54                                                                                | 0.00                                                                                | 0.67                                                                                | 0.54                                                                                | 0.00                                                                                | 0.80                                                                                |
| Avail Cap(c_a), veh/h                                              | 850                                                                               | 0                                                                                 | 0                                                                                 | 831                                                                               | 0                                                                                 | 0                                                                                 | 204                                                                                 | 0                                                                                   | 1369                                                                                | 204                                                                                 | 0                                                                                   | 1413                                                                                |
| HCM Platoon Ratio                                                  | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Upstream Filter(I)                                                 | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                |
| Uniform Delay (d), s/veh                                           | 15.2                                                                              | 0.0                                                                               | 0.0                                                                               | 15.8                                                                              | 0.0                                                                               | 0.0                                                                               | 17.3                                                                                | 0.0                                                                                 | 5.4                                                                                 | 17.3                                                                                | 0.0                                                                                 | 6.1                                                                                 |
| Incr Delay (d2), s/veh                                             | 0.1                                                                               | 0.0                                                                               | 0.0                                                                               | 0.5                                                                               | 0.0                                                                               | 0.0                                                                               | 13.1                                                                                | 0.0                                                                                 | 0.8                                                                                 | 13.6                                                                                | 0.0                                                                                 | 2.2                                                                                 |
| Initial Q Delay(d3),s/veh                                          | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln                                           | 0.2                                                                               | 0.0                                                                               | 0.0                                                                               | 0.8                                                                               | 0.0                                                                               | 0.0                                                                               | 0.3                                                                                 | 0.0                                                                                 | 4.6                                                                                 | 0.3                                                                                 | 0.0                                                                                 | 6.7                                                                                 |
| LnGrp Delay(d),s/veh                                               | 15.3                                                                              | 0.0                                                                               | 0.0                                                                               | 16.3                                                                              | 0.0                                                                               | 0.0                                                                               | 30.3                                                                                | 0.0                                                                                 | 6.3                                                                                 | 30.9                                                                                | 0.0                                                                                 | 8.4                                                                                 |
| LnGrp LOS                                                          | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | C                                                                                   |                                                                                     | A                                                                                   | C                                                                                   |                                                                                     | A                                                                                   |
| Approach Vol, veh/h                                                | 21                                                                                |                                                                                   |                                                                                   | 79                                                                                |                                                                                   |                                                                                   | 678                                                                                 |                                                                                     |                                                                                     | 821                                                                                 |                                                                                     |                                                                                     |
| Approach Delay, s/veh                                              | 15.3                                                                              |                                                                                   |                                                                                   | 16.3                                                                              |                                                                                   |                                                                                   | 6.9                                                                                 |                                                                                     |                                                                                     | 8.8                                                                                 |                                                                                     |                                                                                     |
| Approach LOS                                                       | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | A                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |                                                                                     |
| Timer                                                              | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7                                                                                   | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Assigned Phs                                                       | 1                                                                                 | 2                                                                                 |                                                                                   | 4                                                                                 | 5                                                                                 | 6                                                                                 |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s                                           | 4.6                                                                               | 24.0                                                                              |                                                                                   | 6.8                                                                               | 4.6                                                                               | 24.0                                                                              |                                                                                     | 6.8                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Change Period (Y+Rc), s                                            | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               | 4.0                                                                               |                                                                                     | 4.0                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Green Setting (Gmax),s                                         | 4.0                                                                               | 28.0                                                                              |                                                                                   | 16.0                                                                              | 4.0                                                                               | 28.0                                                                              |                                                                                     | 16.0                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1),s                                        | 2.3                                                                               | 11.5                                                                              |                                                                                   | 2.4                                                                               | 2.3                                                                               | 14.6                                                                              |                                                                                     | 3.7                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s                                            | 0.0                                                                               | 5.9                                                                               |                                                                                   | 0.2                                                                               | 0.0                                                                               | 5.3                                                                               |                                                                                     | 0.2                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Summary                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2010 Ctrl Delay                                                | 8.5                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2010 LOS                                                       | A                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Notes                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| User approved pedestrian interval to be less than phase max green. |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

2018 AM Peak Hour  
without Project with Signal

HCM 2010 Signalized Intersection Summary  
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HCM 2010 TWSC  
4: SR29 & Pratt Ave

25/10/2016

| Intersection             |        |      |      |        |       |       |        |      |      |        |      |      |
|--------------------------|--------|------|------|--------|-------|-------|--------|------|------|--------|------|------|
| Int Delay, s/veh         | 4.7    |      |      |        |       |       |        |      |      |        |      |      |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Movement                 | EBL    | EBT  | EBR  | WBL    | WBT   | WBR   | NBL    | NBT  | NBR  | SBL    | SBT  | SBR  |
| Vol, veh/h               | 7      | 4    | 16   | 37     | 4     | 30    | 13     | 792  | 48   | 28     | 704  | 9    |
| Conflicting Peds, #/hr   | 0      | 0    | 0    | 5      | 0     | 5     | 0      | 0    | 0    | 0      | 0    | 0    |
| Sign Control             | Stop   | Stop | Stop | Stop   | Stop  | Stop  | Free   | Free | Free | Free   | Free | Free |
| RT Channelized           | -      | -    | None | -      | -     | None  | -      | -    | None | -      | -    | None |
| Storage Length           | -      | -    | -    | -      | -     | -     | 75     | -    | -    | 70     | -    | -    |
| Veh in Median Storage, # | -      | 0    | -    | -      | 0     | -     | -      | 0    | -    | -      | 0    | -    |
| Grade, %                 | -      | 0    | -    | -      | 0     | -     | -      | 0    | -    | -      | 0    | -    |
| Peak Hour Factor         | 97     | 97   | 97   | 97     | 97    | 97    | 97     | 97   | 97   | 97     | 97   | 97   |
| Heavy Vehicles, %        | 0      | 0    | 0    | 0      | 0     | 0     | 0      | 2    | 0    | 0      | 2    | 0    |
| Mvmt Flow                | 7      | 4    | 16   | 38     | 4     | 31    | 13     | 816  | 49   | 29     | 726  | 9    |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Major/Minor              | Minor2 |      |      | Minor1 |       |       | Major1 |      |      | Major2 |      |      |
| Conflicting Flow All     | 1679   | 1686 | 730  | 1671   | 1666  | 846   | 735    | 0    | 0    | 871    | 0    | 0    |
| Stage 1                  | 788    | 788  | -    | 873    | 873   | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                  | 891    | 898  | -    | 798    | 793   | -     | -      | -    | -    | -      | -    | -    |
| Critical Hdwy            | 7.1    | 6.5  | 6.2  | 7.1    | 6.5   | 6.2   | 4.1    | -    | -    | 4.1    | -    | -    |
| Critical Hdwy Stg 1      | 6.1    | 5.5  | -    | 6.1    | 5.5   | -     | -      | -    | -    | -      | -    | -    |
| Critical Hdwy Stg 2      | 6.1    | 5.5  | -    | 6.1    | 5.5   | -     | -      | -    | -    | -      | -    | -    |
| Follow-up Hdwy           | 3.5    | 4    | 3.3  | 3.5    | 4     | 3.3   | 2.2    | -    | -    | 2.2    | -    | -    |
| Pot Cap-1 Maneuver       | 76     | 95   | 426  | 77     | 98    | 365   | 879    | -    | -    | 783    | -    | -    |
| Stage 1                  | 387    | 405  | -    | 348    | 370   | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                  | 340    | 361  | -    | 382    | 403   | -     | -      | -    | -    | -      | -    | -    |
| Platoon blocked, %       |        |      |      |        |       |       |        | -    | -    |        | -    | -    |
| Mov Cap-1 Maneuver       | 65     | 90   | 426  | 68     | 93    | 363   | 879    | -    | -    | 783    | -    | -    |
| Mov Cap-2 Maneuver       | 65     | 90   | -    | 68     | 93    | -     | -      | -    | -    | -      | -    | -    |
| Stage 1                  | 381    | 390  | -    | 341    | 363   | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                  | 303    | 354  | -    | 350    | 388   | -     | -      | -    | -    | -      | -    | -    |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Approach                 | EB     |      |      | WB     |       |       | NB     |      |      | SB     |      |      |
| HCM Control Delay, s     | 36.4   |      |      | 93.4   |       |       | 0.1    |      |      | 0.4    |      |      |
| HCM LOS                  | E      |      |      | F      |       |       |        |      |      |        |      |      |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT  | NBR  | EBLn1  | WBLn1 | SBL   | SBT    | SBR  |      |        |      |      |
| Capacity (veh/h)         | 879    | -    | -    | 142    | 106   | 783   | -      | -    |      |        |      |      |
| HCM Lane V/C Ratio       | 0.015  | -    | -    | 0.196  | 0.691 | 0.037 | -      | -    |      |        |      |      |
| HCM Control Delay (s)    | 9.2    | -    | -    | 36.4   | 93.4  | 9.8   | -      | -    |      |        |      |      |
| HCM Lane LOS             | A      | -    | -    | E      | F     | A     | -      | -    |      |        |      |      |
| HCM 95th %tile Q(veh)    | 0      | -    | -    | 0.7    | 3.6   | 0.1   | -      | -    |      |        |      |      |

2018 PM Peak Hour  
without Project

Synchro 8 Report  
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HCM 2010 Signalized Intersection Summary  
4: SR29 & Pratt Ave

22/06/2016

|                              |  |  |  |  |  |  |   |  |  |  |  |  |
|------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                     | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations          |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |  |  |                                                                                     |  |  |                                                                                     |
| Volume (veh/h)               | 7                                                                                 | 4                                                                                 | 16                                                                                | 37                                                                                | 4                                                                                 | 30                                                                                | 13                                                                                  | 792                                                                                 | 48                                                                                  | 28                                                                                  | 704                                                                                 | 9                                                                                   |
| Number                       | 7                                                                                 | 4                                                                                 | 14                                                                                | 3                                                                                 | 8                                                                                 | 18                                                                                | 5                                                                                   | 2                                                                                   | 12                                                                                  | 1                                                                                   | 6                                                                                   | 16                                                                                  |
| Initial Q (Qb), veh          | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ped-Bike Adj(A_pbT)          | 0.98                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 0.94                                                                              | 1.00                                                                                |                                                                                     | 0.98                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Parking Bus, Adj             | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Adj Sat Flow, veh/h/ln       | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                                | 1865                                                                                | 1900                                                                                | 1900                                                                                | 1863                                                                                | 1900                                                                                |
| Adj Flow Rate, veh/h         | 7                                                                                 | 4                                                                                 | 16                                                                                | 38                                                                                | 4                                                                                 | 31                                                                                | 13                                                                                  | 816                                                                                 | 49                                                                                  | 29                                                                                  | 726                                                                                 | 9                                                                                   |
| Adj No. of Lanes             | 0                                                                                 | 1                                                                                 | 0                                                                                 | 0                                                                                 | 1                                                                                 | 0                                                                                 | 1                                                                                   | 1                                                                                   | 0                                                                                   | 1                                                                                   | 1                                                                                   | 0                                                                                   |
| Peak Hour Factor             | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                |
| Percent Heavy Veh, %         | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 2                                                                                   | 2                                                                                   | 0                                                                                   | 2                                                                                   | 2                                                                                   |
| Cap, veh/h                   | 149                                                                               | 26                                                                                | 79                                                                                | 208                                                                               | 7                                                                                 | 51                                                                                | 24                                                                                  | 1002                                                                                | 60                                                                                  | 50                                                                                  | 1085                                                                                | 13                                                                                  |
| Arrive On Green              | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.01                                                                                | 0.58                                                                                | 0.58                                                                                | 0.03                                                                                | 0.59                                                                                | 0.59                                                                                |
| Sat Flow, veh/h              | 369                                                                               | 329                                                                               | 1015                                                                              | 806                                                                               | 85                                                                                | 657                                                                               | 1810                                                                                | 1739                                                                                | 104                                                                                 | 1810                                                                                | 1836                                                                                | 23                                                                                  |
| Grp Volume(v), veh/h         | 27                                                                                | 0                                                                                 | 0                                                                                 | 73                                                                                | 0                                                                                 | 0                                                                                 | 13                                                                                  | 0                                                                                   | 865                                                                                 | 29                                                                                  | 0                                                                                   | 735                                                                                 |
| Grp Sat Flow(s),veh/h/ln     | 1714                                                                              | 0                                                                                 | 0                                                                                 | 1548                                                                              | 0                                                                                 | 0                                                                                 | 1810                                                                                | 0                                                                                   | 1843                                                                                | 1810                                                                                | 0                                                                                   | 1859                                                                                |
| Q Serve(g_s), s              | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 1.1                                                                               | 0.0                                                                               | 0.0                                                                               | 0.3                                                                                 | 0.0                                                                                 | 14.1                                                                                | 0.6                                                                                 | 0.0                                                                                 | 10.1                                                                                |
| Cycle Q Clear(g_c), s        | 0.6                                                                               | 0.0                                                                               | 0.0                                                                               | 1.7                                                                               | 0.0                                                                               | 0.0                                                                               | 0.3                                                                                 | 0.0                                                                                 | 14.1                                                                                | 0.6                                                                                 | 0.0                                                                                 | 10.1                                                                                |
| Prop In Lane                 | 0.26                                                                              |                                                                                   | 0.59                                                                              | 0.52                                                                              |                                                                                   | 0.42                                                                              | 1.00                                                                                |                                                                                     | 0.06                                                                                | 1.00                                                                                |                                                                                     | 0.01                                                                                |
| Lane Grp Cap(c), veh/h       | 254                                                                               | 0                                                                                 | 0                                                                                 | 266                                                                               | 0                                                                                 | 0                                                                                 | 24                                                                                  | 0                                                                                   | 1062                                                                                | 50                                                                                  | 0                                                                                   | 1098                                                                                |
| V/C Ratio(X)                 | 0.11                                                                              | 0.00                                                                              | 0.00                                                                              | 0.27                                                                              | 0.00                                                                              | 0.00                                                                              | 0.53                                                                                | 0.00                                                                                | 0.81                                                                                | 0.58                                                                                | 0.00                                                                                | 0.67                                                                                |
| Avail Cap(c_a), veh/h        | 798                                                                               | 0                                                                                 | 0                                                                                 | 776                                                                               | 0                                                                                 | 0                                                                                 | 192                                                                                 | 0                                                                                   | 1367                                                                                | 192                                                                                 | 0                                                                                   | 1378                                                                                |
| HCM Platoon Ratio            | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Upstream Filter(I)           | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                |
| Uniform Delay (d), s/veh     | 16.3                                                                              | 0.0                                                                               | 0.0                                                                               | 16.8                                                                              | 0.0                                                                               | 0.0                                                                               | 18.5                                                                                | 0.0                                                                                 | 6.4                                                                                 | 18.1                                                                                | 0.0                                                                                 | 5.2                                                                                 |
| Incr Delay (d2), s/veh       | 0.2                                                                               | 0.0                                                                               | 0.0                                                                               | 0.6                                                                               | 0.0                                                                               | 0.0                                                                               | 16.8                                                                                | 0.0                                                                                 | 3.0                                                                                 | 10.0                                                                                | 0.0                                                                                 | 0.9                                                                                 |
| Initial Q Delay(d3),s/veh    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln     | 0.3                                                                               | 0.0                                                                               | 0.0                                                                               | 0.8                                                                               | 0.0                                                                               | 0.0                                                                               | 0.2                                                                                 | 0.0                                                                                 | 7.9                                                                                 | 0.4                                                                                 | 0.0                                                                                 | 5.2                                                                                 |
| LnGrp Delay(d),s/veh         | 16.5                                                                              | 0.0                                                                               | 0.0                                                                               | 17.3                                                                              | 0.0                                                                               | 0.0                                                                               | 35.3                                                                                | 0.0                                                                                 | 9.4                                                                                 | 28.2                                                                                | 0.0                                                                                 | 6.1                                                                                 |
| LnGrp LOS                    | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | D                                                                                   |                                                                                     | A                                                                                   | C                                                                                   |                                                                                     | A                                                                                   |
| Approach Vol, veh/h          | 27                                                                                |                                                                                   |                                                                                   | 73                                                                                |                                                                                   |                                                                                   | 878                                                                                 |                                                                                     |                                                                                     | 764                                                                                 |                                                                                     |                                                                                     |
| Approach Delay, s/veh        | 16.5                                                                              |                                                                                   |                                                                                   | 17.3                                                                              |                                                                                   |                                                                                   | 9.8                                                                                 |                                                                                     |                                                                                     | 7.0                                                                                 |                                                                                     |                                                                                     |
| Approach LOS                 | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | A                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |                                                                                     |
| Timer                        | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7                                                                                   | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Assigned Phs                 | 1                                                                                 | 2                                                                                 |                                                                                   | 4                                                                                 | 5                                                                                 | 6                                                                                 |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s     | 5.0                                                                               | 25.8                                                                              |                                                                                   | 7.0                                                                               | 4.5                                                                               | 26.3                                                                              |                                                                                     | 7.0                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Change Period (Y+Rc), s      | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               | 4.0                                                                               |                                                                                     | 4.0                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Green Setting (Gmax), s  | 4.0                                                                               | 28.0                                                                              |                                                                                   | 16.0                                                                              | 4.0                                                                               | 28.0                                                                              |                                                                                     | 16.0                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1), s | 4.0                                                                               | 16.1                                                                              |                                                                                   | 2.6                                                                               | 2.3                                                                               | 12.1                                                                              |                                                                                     | 3.7                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s      | 0.0                                                                               | 5.6                                                                               |                                                                                   | 0.2                                                                               | 0.0                                                                               | 6.6                                                                               |                                                                                     | 0.2                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| <b>Intersection Summary</b>  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2010 Ctrl Delay          |                                                                                   |                                                                                   |                                                                                   | 9.0                                                                               |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2010 LOS                 |                                                                                   |                                                                                   |                                                                                   | A                                                                                 |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

HCM 2010 TWSC  
4: SR29 & Pratt Ave

25/10/2016

| Intersection             |        |      |      |        |       |       |        |      |      |        |      |      |
|--------------------------|--------|------|------|--------|-------|-------|--------|------|------|--------|------|------|
| Int Delay, s/veh         | 4.1    |      |      |        |       |       |        |      |      |        |      |      |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Movement                 | EBL    | EBT  | EBR  | WBL    | WBT   | WBR   | NBL    | NBT  | NBR  | SBL    | SBT  | SBR  |
| Vol, veh/h               | 8      | 3    | 8    | 45     | 4     | 28    | 17     | 523  | 70   | 16     | 730  | 7    |
| Conflicting Peds, #/hr   | 0      | 0    | 0    | 5      | 0     | 5     | 0      | 0    | 0    | 0      | 0    | 0    |
| Sign Control             | Stop   | Stop | Stop | Stop   | Stop  | Stop  | Free   | Free | Free | Free   | Free | Free |
| RT Channelized           | -      | -    | None | -      | -     | None  | -      | -    | None | -      | -    | None |
| Storage Length           | -      | -    | -    | -      | -     | -     | 0      | -    | -    | 70     | -    | -    |
| Veh in Median Storage, # | -      | 0    | -    | -      | 0     | -     | -      | 0    | -    | -      | 0    | -    |
| Grade, %                 | -      | 0    | -    | -      | 0     | -     | -      | 0    | -    | -      | 0    | -    |
| Peak Hour Factor         | 92     | 92   | 92   | 92     | 92    | 92    | 92     | 92   | 92   | 92     | 92   | 92   |
| Heavy Vehicles, %        | 0      | 0    | 0    | 0      | 0     | 0     | 0      | 8    | 0    | 0      | 6    | 0    |
| Mvmt Flow                | 9      | 3    | 9    | 49     | 4     | 30    | 18     | 568  | 76   | 17     | 793  | 8    |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Major/Minor              | Minor2 |      |      | Minor1 |       |       | Major1 |      |      | Major2 |      |      |
| Conflicting Flow All     | 1498   | 1519 | 797  | 1486   | 1484  | 612   | 801    | 0    | 0    | 650    | 0    | 0    |
| Stage 1                  | 832    | 832  | -    | 648    | 648   | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                  | 666    | 687  | -    | 838    | 836   | -     | -      | -    | -    | -      | -    | -    |
| Critical Hdwy            | 7.1    | 6.5  | 6.2  | 7.1    | 6.5   | 6.2   | 4.1    | -    | -    | 4.1    | -    | -    |
| Critical Hdwy Stg 1      | 6.1    | 5.5  | -    | 6.1    | 5.5   | -     | -      | -    | -    | -      | -    | -    |
| Critical Hdwy Stg 2      | 6.1    | 5.5  | -    | 6.1    | 5.5   | -     | -      | -    | -    | -      | -    | -    |
| Follow-up Hdwy           | 3.5    | 4    | 3.3  | 3.5    | 4     | 3.3   | 2.2    | -    | -    | 2.2    | -    | -    |
| Pot Cap-1 Maneuver       | 102    | 120  | 390  | 104    | 126   | 497   | 831    | -    | -    | 946    | -    | -    |
| Stage 1                  | 366    | 387  | -    | 462    | 469   | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                  | 452    | 450  | -    | 364    | 385   | -     | -      | -    | -    | -      | -    | -    |
| Platoon blocked, %       |        |      |      |        |       |       |        | -    | -    |        | -    | -    |
| Mov Cap-1 Maneuver       | 90     | 115  | 390  | 96     | 121   | 495   | 831    | -    | -    | 946    | -    | -    |
| Mov Cap-2 Maneuver       | 90     | 115  | -    | 96     | 121   | -     | -      | -    | -    | -      | -    | -    |
| Stage 1                  | 358    | 380  | -    | 450    | 457   | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                  | 411    | 438  | -    | 346    | 378   | -     | -      | -    | -    | -      | -    | -    |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Approach                 | EB     |      |      | WB     |       |       | NB     |      |      | SB     |      |      |
| HCM Control Delay, s     | 35.1   |      |      | 64.9   |       |       | 0.3    |      |      | 0.2    |      |      |
| HCM LOS                  | E      |      |      | F      |       |       |        |      |      |        |      |      |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT  | NBR  | EBLn1  | WBLn1 | SBL   | SBT    | SBR  |      |        |      |      |
| Capacity (veh/h)         | 831    | -    | -    | 140    | 138   | 946   | -      | -    |      |        |      |      |
| HCM Lane V/C Ratio       | 0.022  | -    | -    | 0.148  | 0.606 | 0.018 | -      | -    |      |        |      |      |
| HCM Control Delay (s)    | 9.4    | -    | -    | 35.1   | 64.9  | 8.9   | -      | -    |      |        |      |      |
| HCM Lane LOS             | A      | -    | -    | E      | F     | A     | -      | -    |      |        |      |      |
| HCM 95th %tile Q(veh)    | 0.1    | -    | -    | 0.5    | 3.2   | 0.1   | -      | -    |      |        |      |      |

2018 AM Peak Hour  
with Project

Synchro 8 Report  
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HCM 2010 Signalized Intersection Summary  
4: SR29 & Pratt Ave

25/10/2016

|                             |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                    | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations         |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |  |  |                                                                                     |  |  |  |
| Volume (veh/h)              | 8                                                                                 | 3                                                                                 | 8                                                                                 | 45                                                                                | 4                                                                                 | 28                                                                                | 17                                                                                 | 523                                                                                 | 70                                                                                  | 16                                                                                  | 730                                                                                 | 7                                                                                   |
| Number                      | 7                                                                                 | 4                                                                                 | 14                                                                                | 3                                                                                 | 8                                                                                 | 18                                                                                | 5                                                                                  | 2                                                                                   | 12                                                                                  | 1                                                                                   | 6                                                                                   | 16                                                                                  |
| Initial Q (Qb), veh         | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ped-Bike Adj(A_pbT)         | 0.98                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 0.94                                                                              | 1.00                                                                               |                                                                                     | 0.98                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Parking Bus, Adj            | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Adj Sat Flow, veh/h/ln      | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                               | 1775                                                                                | 1900                                                                                | 1900                                                                                | 1793                                                                                | 1900                                                                                |
| Adj Flow Rate, veh/h        | 9                                                                                 | 3                                                                                 | 9                                                                                 | 49                                                                                | 4                                                                                 | 30                                                                                | 18                                                                                 | 568                                                                                 | 76                                                                                  | 17                                                                                  | 793                                                                                 | 8                                                                                   |
| Adj No. of Lanes            | 0                                                                                 | 1                                                                                 | 0                                                                                 | 0                                                                                 | 1                                                                                 | 0                                                                                 | 1                                                                                  | 1                                                                                   | 0                                                                                   | 1                                                                                   | 1                                                                                   | 0                                                                                   |
| Peak Hour Factor            | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                               | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                |
| Percent Heavy Veh, %        | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 8                                                                                   | 8                                                                                   | 0                                                                                   | 6                                                                                   | 6                                                                                   |
| Cap, veh/h                  | 197                                                                               | 29                                                                                | 61                                                                                | 236                                                                               | 6                                                                                 | 45                                                                                | 33                                                                                 | 858                                                                                 | 115                                                                                 | 31                                                                                  | 994                                                                                 | 10                                                                                  |
| Arrive On Green             | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.02                                                                               | 0.56                                                                                | 0.56                                                                                | 0.02                                                                                | 0.56                                                                                | 0.56                                                                                |
| Sat Flow, veh/h             | 626                                                                               | 355                                                                               | 735                                                                               | 901                                                                               | 74                                                                                | 552                                                                               | 1810                                                                               | 1528                                                                                | 205                                                                                 | 1810                                                                                | 1772                                                                                | 18                                                                                  |
| Grp Volume(v), veh/h        | 21                                                                                | 0                                                                                 | 0                                                                                 | 83                                                                                | 0                                                                                 | 0                                                                                 | 18                                                                                 | 0                                                                                   | 644                                                                                 | 17                                                                                  | 0                                                                                   | 801                                                                                 |
| Grp Sat Flow(s),veh/h/ln    | 1716                                                                              | 0                                                                                 | 0                                                                                 | 1526                                                                              | 0                                                                                 | 0                                                                                 | 1810                                                                               | 0                                                                                   | 1733                                                                                | 1810                                                                                | 0                                                                                   | 1790                                                                                |
| Q Serve(g_s), s             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 1.4                                                                               | 0.0                                                                               | 0.0                                                                               | 0.3                                                                                | 0.0                                                                                 | 9.2                                                                                 | 0.3                                                                                 | 0.0                                                                                 | 12.6                                                                                |
| Cycle Q Clear(g_c), s       | 0.4                                                                               | 0.0                                                                               | 0.0                                                                               | 1.8                                                                               | 0.0                                                                               | 0.0                                                                               | 0.3                                                                                | 0.0                                                                                 | 9.2                                                                                 | 0.3                                                                                 | 0.0                                                                                 | 12.6                                                                                |
| Prop In Lane                | 0.43                                                                              |                                                                                   | 0.43                                                                              | 0.59                                                                              |                                                                                   | 0.36                                                                              | 1.00                                                                               |                                                                                     | 0.12                                                                                | 1.00                                                                                |                                                                                     | 0.01                                                                                |
| Lane Grp Cap(c), veh/h      | 287                                                                               | 0                                                                                 | 0                                                                                 | 287                                                                               | 0                                                                                 | 0                                                                                 | 33                                                                                 | 0                                                                                   | 973                                                                                 | 31                                                                                  | 0                                                                                   | 1004                                                                                |
| V/C Ratio(X)                | 0.07                                                                              | 0.00                                                                              | 0.00                                                                              | 0.29                                                                              | 0.00                                                                              | 0.00                                                                              | 0.54                                                                               | 0.00                                                                                | 0.66                                                                                | 0.54                                                                                | 0.00                                                                                | 0.80                                                                                |
| Avail Cap(c_a), veh/h       | 851                                                                               | 0                                                                                 | 0                                                                                 | 832                                                                               | 0                                                                                 | 0                                                                                 | 204                                                                                | 0                                                                                   | 1369                                                                                | 204                                                                                 | 0                                                                                   | 1414                                                                                |
| HCM Platoon Ratio           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Upstream Filter(I)          | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                               | 0.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                |
| Uniform Delay (d), s/veh    | 15.1                                                                              | 0.0                                                                               | 0.0                                                                               | 15.7                                                                              | 0.0                                                                               | 0.0                                                                               | 17.2                                                                               | 0.0                                                                                 | 5.4                                                                                 | 17.3                                                                                | 0.0                                                                                 | 6.2                                                                                 |
| Incr Delay (d2), s/veh      | 0.1                                                                               | 0.0                                                                               | 0.0                                                                               | 0.5                                                                               | 0.0                                                                               | 0.0                                                                               | 13.1                                                                               | 0.0                                                                                 | 0.8                                                                                 | 13.6                                                                                | 0.0                                                                                 | 2.2                                                                                 |
| Initial Q Delay(d3),s/veh   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln    | 0.2                                                                               | 0.0                                                                               | 0.0                                                                               | 0.8                                                                               | 0.0                                                                               | 0.0                                                                               | 0.3                                                                                | 0.0                                                                                 | 4.5                                                                                 | 0.3                                                                                 | 0.0                                                                                 | 6.6                                                                                 |
| LnGrp Delay(d),s/veh        | 15.2                                                                              | 0.0                                                                               | 0.0                                                                               | 16.3                                                                              | 0.0                                                                               | 0.0                                                                               | 30.3                                                                               | 0.0                                                                                 | 6.2                                                                                 | 30.9                                                                                | 0.0                                                                                 | 8.4                                                                                 |
| LnGrp LOS                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | C                                                                                  |                                                                                     | A                                                                                   | C                                                                                   |                                                                                     | A                                                                                   |
| Approach Vol, veh/h         | 21                                                                                |                                                                                   |                                                                                   | 83                                                                                |                                                                                   |                                                                                   | 662                                                                                |                                                                                     |                                                                                     | 818                                                                                 |                                                                                     |                                                                                     |
| Approach Delay, s/veh       | 15.2                                                                              |                                                                                   |                                                                                   | 16.3                                                                              |                                                                                   |                                                                                   | 6.9                                                                                |                                                                                     |                                                                                     | 8.9                                                                                 |                                                                                     |                                                                                     |
| Approach LOS                | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | A                                                                                  |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |                                                                                     |
| Timer                       | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7                                                                                  | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Assigned Phs                | 1                                                                                 | 2                                                                                 |                                                                                   | 4                                                                                 | 5                                                                                 | 6                                                                                 |                                                                                    | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s    | 4.6                                                                               | 23.9                                                                              |                                                                                   | 6.9                                                                               | 4.6                                                                               | 23.9                                                                              |                                                                                    | 6.9                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Change Period (Y+Rc), s     | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               | 4.0                                                                               |                                                                                    | 4.0                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Green Setting (Gmax),s  | 4.0                                                                               | 28.0                                                                              |                                                                                   | 16.0                                                                              | 4.0                                                                               | 28.0                                                                              |                                                                                    | 16.0                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1),s | 2.8                                                                               | 11.2                                                                              |                                                                                   | 2.4                                                                               | 2.3                                                                               | 14.6                                                                              |                                                                                    | 3.8                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s     | 0.0                                                                               | 5.8                                                                               |                                                                                   | 0.2                                                                               | 0.0                                                                               | 5.3                                                                               |                                                                                    | 0.2                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

Intersection Summary

HCM 2010 Ctrl Delay 8.5  
HCM 2010 LOS A

Notes

User approved pedestrian interval to be less than phase max green.

HCM 2010 TWSC  
4: SR29 & Pratt Ave

22/06/2016

| Intersection             |        |      |      |        |       |       |        |      |      |        |      |      |
|--------------------------|--------|------|------|--------|-------|-------|--------|------|------|--------|------|------|
| Int Delay, s/veh         | 5      |      |      |        |       |       |        |      |      |        |      |      |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Movement                 | EBL    | EBT  | EBR  | WBL    | WBT   | WBR   | NBL    | NBT  | NBR  | SBL    | SBT  | SBR  |
| Vol, veh/h               | 7      | 4    | 16   | 40     | 4     | 31    | 13     | 785  | 52   | 28     | 689  | 9    |
| Conflicting Peds, #/hr   | 0      | 0    | 0    | 5      | 0     | 5     | 0      | 0    | 0    | 0      | 0    | 0    |
| Sign Control             | Stop   | Stop | Stop | Stop   | Stop  | Stop  | Free   | Free | Free | Free   | Free | Free |
| RT Channelized           | -      | -    | None | -      | -     | None  | -      | -    | None | -      | -    | None |
| Storage Length           | -      | -    | -    | -      | -     | -     | 75     | -    | -    | 70     | -    | -    |
| Veh in Median Storage, # | -      | 0    | -    | -      | 0     | -     | -      | 0    | -    | -      | 0    | -    |
| Grade, %                 | -      | 0    | -    | -      | 0     | -     | -      | 0    | -    | -      | 0    | -    |
| Peak Hour Factor         | 97     | 97   | 97   | 97     | 97    | 97    | 97     | 97   | 97   | 97     | 97   | 97   |
| Heavy Vehicles, %        | 0      | 0    | 0    | 0      | 0     | 0     | 0      | 2    | 0    | 0      | 2    | 0    |
| Mvmt Flow                | 7      | 4    | 16   | 41     | 4     | 32    | 13     | 809  | 54   | 29     | 710  | 9    |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Major/Minor              | Minor2 |      |      | Minor1 |       |       | Major1 |      |      | Major2 |      |      |
| Conflicting Flow All     | 1659   | 1668 | 715  | 1651   | 1645  | 841   | 720    | 0    | 0    | 868    | 0    | 0    |
| Stage 1                  | 773    | 773  | -    | 868    | 868   | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                  | 886    | 895  | -    | 783    | 777   | -     | -      | -    | -    | -      | -    | -    |
| Critical Hdwy            | 7.1    | 6.5  | 6.2  | 7.1    | 6.5   | 6.2   | 4.1    | -    | -    | 4.1    | -    | -    |
| Critical Hdwy Stg 1      | 6.1    | 5.5  | -    | 6.1    | 5.5   | -     | -      | -    | -    | -      | -    | -    |
| Critical Hdwy Stg 2      | 6.1    | 5.5  | -    | 6.1    | 5.5   | -     | -      | -    | -    | -      | -    | -    |
| Follow-up Hdwy           | 3.5    | 4    | 3.3  | 3.5    | 4     | 3.3   | 2.2    | -    | -    | 2.2    | -    | -    |
| Pot Cap-1 Maneuver       | 79     | 97   | 434  | 80     | 101   | 368   | 891    | -    | -    | 785    | -    | -    |
| Stage 1                  | 395    | 412  | -    | 350    | 372   | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                  | 342    | 362  | -    | 390    | 410   | -     | -      | -    | -    | -      | -    | -    |
| Platoon blocked, %       |        |      |      |        |       |       |        | -    | -    |        | -    | -    |
| Mov Cap-1 Maneuver       | 67     | 92   | 434  | 71     | 95    | 366   | 891    | -    | -    | 785    | -    | -    |
| Mov Cap-2 Maneuver       | 67     | 92   | -    | 71     | 95    | -     | -      | -    | -    | -      | -    | -    |
| Stage 1                  | 389    | 397  | -    | 343    | 365   | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                  | 304    | 355  | -    | 358    | 395   | -     | -      | -    | -    | -      | -    | -    |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Approach                 | EB     |      |      | WB     |       |       | NB     |      |      | SB     |      |      |
| HCM Control Delay, s     | 35.4   |      |      | 94.4   |       |       | 0.1    |      |      | 0.4    |      |      |
| HCM LOS                  | E      |      |      | F      |       |       |        |      |      |        |      |      |
|                          |        |      |      |        |       |       |        |      |      |        |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT  | NBR  | EBLn1  | WBLn1 | SBL   | SBT    | SBR  |      |        |      |      |
| Capacity (veh/h)         | 891    | -    | -    | 146    | 109   | 785   | -      | -    |      |        |      |      |
| HCM Lane V/C Ratio       | 0.015  | -    | -    | 0.191  | 0.709 | 0.037 | -      | -    |      |        |      |      |
| HCM Control Delay (s)    | 9.1    | -    | -    | 35.4   | 94.4  | 9.8   | -      | -    |      |        |      |      |
| HCM Lane LOS             | A      | -    | -    | E      | F     | A     | -      | -    |      |        |      |      |
| HCM 95th %tile Q(veh)    | 0      | -    | -    | 0.7    | 3.8   | 0.1   | -      | -    |      |        |      |      |

2018 PM Peak Hour  
with Project No Signal

Synchro 8 Report  
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HCM 2010 Signalized Intersection Summary  
4: SR29 & Pratt Ave

22/06/2016

|                             |  |  |  |  |  |  |   |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                    | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations         |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |  |  |                                                                                     |  |  |                                                                                     |
| Volume (veh/h)              | 7                                                                                 | 4                                                                                 | 16                                                                                | 40                                                                                | 4                                                                                 | 31                                                                                | 13                                                                                  | 785                                                                                 | 52                                                                                  | 28                                                                                  | 689                                                                                 | 9                                                                                   |
| Number                      | 7                                                                                 | 4                                                                                 | 14                                                                                | 3                                                                                 | 8                                                                                 | 18                                                                                | 5                                                                                   | 2                                                                                   | 12                                                                                  | 1                                                                                   | 6                                                                                   | 16                                                                                  |
| Initial Q (Qb), veh         | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ped-Bike Adj(A_pbT)         | 0.98                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 0.94                                                                              | 1.00                                                                                |                                                                                     | 0.98                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Parking Bus, Adj            | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Adj Sat Flow, veh/h/ln      | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                                | 1865                                                                                | 1900                                                                                | 1900                                                                                | 1863                                                                                | 1900                                                                                |
| Adj Flow Rate, veh/h        | 7                                                                                 | 4                                                                                 | 16                                                                                | 41                                                                                | 4                                                                                 | 32                                                                                | 13                                                                                  | 809                                                                                 | 54                                                                                  | 29                                                                                  | 710                                                                                 | 9                                                                                   |
| Adj No. of Lanes            | 0                                                                                 | 1                                                                                 | 0                                                                                 | 0                                                                                 | 1                                                                                 | 0                                                                                 | 1                                                                                   | 1                                                                                   | 0                                                                                   | 1                                                                                   | 1                                                                                   | 0                                                                                   |
| Peak Hour Factor            | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                |
| Percent Heavy Veh, %        | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 2                                                                                   | 2                                                                                   | 0                                                                                   | 2                                                                                   | 2                                                                                   |
| Cap, veh/h                  | 149                                                                               | 27                                                                                | 81                                                                                | 212                                                                               | 6                                                                                 | 51                                                                                | 24                                                                                  | 992                                                                                 | 66                                                                                  | 50                                                                                  | 1081                                                                                | 14                                                                                  |
| Arrive On Green             | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.01                                                                                | 0.57                                                                                | 0.57                                                                                | 0.03                                                                                | 0.59                                                                                | 0.59                                                                                |
| Sat Flow, veh/h             | 364                                                                               | 336                                                                               | 1018                                                                              | 822                                                                               | 80                                                                                | 642                                                                               | 1810                                                                                | 1726                                                                                | 115                                                                                 | 1810                                                                                | 1836                                                                                | 23                                                                                  |
| Grp Volume(v), veh/h        | 27                                                                                | 0                                                                                 | 0                                                                                 | 77                                                                                | 0                                                                                 | 0                                                                                 | 13                                                                                  | 0                                                                                   | 863                                                                                 | 29                                                                                  | 0                                                                                   | 719                                                                                 |
| Grp Sat Flow(s),veh/h/ln    | 1719                                                                              | 0                                                                                 | 0                                                                                 | 1545                                                                              | 0                                                                                 | 0                                                                                 | 1810                                                                                | 0                                                                                   | 1841                                                                                | 1810                                                                                | 0                                                                                   | 1859                                                                                |
| Q Serve(g_s), s             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 1.2                                                                               | 0.0                                                                               | 0.0                                                                               | 0.3                                                                                 | 0.0                                                                                 | 14.2                                                                                | 0.6                                                                                 | 0.0                                                                                 | 9.8                                                                                 |
| Cycle Q Clear(g_c), s       | 0.6                                                                               | 0.0                                                                               | 0.0                                                                               | 1.8                                                                               | 0.0                                                                               | 0.0                                                                               | 0.3                                                                                 | 0.0                                                                                 | 14.2                                                                                | 0.6                                                                                 | 0.0                                                                                 | 9.8                                                                                 |
| Prop In Lane                | 0.26                                                                              |                                                                                   | 0.59                                                                              | 0.53                                                                              |                                                                                   | 0.42                                                                              | 1.00                                                                                |                                                                                     | 0.06                                                                                | 1.00                                                                                |                                                                                     | 0.01                                                                                |
| Lane Grp Cap(c), veh/h      | 257                                                                               | 0                                                                                 | 0                                                                                 | 269                                                                               | 0                                                                                 | 0                                                                                 | 24                                                                                  | 0                                                                                   | 1058                                                                                | 50                                                                                  | 0                                                                                   | 1095                                                                                |
| V/C Ratio(X)                | 0.11                                                                              | 0.00                                                                              | 0.00                                                                              | 0.29                                                                              | 0.00                                                                              | 0.00                                                                              | 0.53                                                                                | 0.00                                                                                | 0.82                                                                                | 0.58                                                                                | 0.00                                                                                | 0.66                                                                                |
| Avail Cap(c_a), veh/h       | 799                                                                               | 0                                                                                 | 0                                                                                 | 777                                                                               | 0                                                                                 | 0                                                                                 | 192                                                                                 | 0                                                                                   | 1365                                                                                | 192                                                                                 | 0                                                                                   | 1378                                                                                |
| HCM Platoon Ratio           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Upstream Filter(I)          | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                |
| Uniform Delay (d), s/veh    | 16.2                                                                              | 0.0                                                                               | 0.0                                                                               | 16.8                                                                              | 0.0                                                                               | 0.0                                                                               | 18.5                                                                                | 0.0                                                                                 | 6.4                                                                                 | 18.1                                                                                | 0.0                                                                                 | 5.2                                                                                 |
| Incr Delay (d2), s/veh      | 0.2                                                                               | 0.0                                                                               | 0.0                                                                               | 0.6                                                                               | 0.0                                                                               | 0.0                                                                               | 16.8                                                                                | 0.0                                                                                 | 3.1                                                                                 | 10.0                                                                                | 0.0                                                                                 | 0.8                                                                                 |
| Initial Q Delay(d3),s/veh   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln    | 0.3                                                                               | 0.0                                                                               | 0.0                                                                               | 0.8                                                                               | 0.0                                                                               | 0.0                                                                               | 0.2                                                                                 | 0.0                                                                                 | 7.9                                                                                 | 0.4                                                                                 | 0.0                                                                                 | 5.0                                                                                 |
| LnGrp Delay(d),s/veh        | 16.4                                                                              | 0.0                                                                               | 0.0                                                                               | 17.3                                                                              | 0.0                                                                               | 0.0                                                                               | 35.3                                                                                | 0.0                                                                                 | 9.5                                                                                 | 28.2                                                                                | 0.0                                                                                 | 6.0                                                                                 |
| LnGrp LOS                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | D                                                                                   |                                                                                     | A                                                                                   | C                                                                                   |                                                                                     | A                                                                                   |
| Approach Vol, veh/h         | 27                                                                                |                                                                                   |                                                                                   | 77                                                                                |                                                                                   |                                                                                   | 876                                                                                 |                                                                                     |                                                                                     | 748                                                                                 |                                                                                     |                                                                                     |
| Approach Delay, s/veh       | 16.4                                                                              |                                                                                   |                                                                                   | 17.3                                                                              |                                                                                   |                                                                                   | 9.9                                                                                 |                                                                                     |                                                                                     | 6.8                                                                                 |                                                                                     |                                                                                     |
| Approach LOS                | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | A                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |                                                                                     |
| Timer                       | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7                                                                                   | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Assigned Phs                | 1                                                                                 | 2                                                                                 |                                                                                   | 4                                                                                 | 5                                                                                 | 6                                                                                 |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s    | 5.0                                                                               | 25.7                                                                              |                                                                                   | 7.0                                                                               | 4.5                                                                               | 26.2                                                                              |                                                                                     | 7.0                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Change Period (Y+Rc), s     | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               | 4.0                                                                               |                                                                                     | 4.0                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Green Setting (Gmax),s  | 4.0                                                                               | 28.0                                                                              |                                                                                   | 16.0                                                                              | 4.0                                                                               | 28.0                                                                              |                                                                                     | 16.0                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1),s | 16.2                                                                              |                                                                                   |                                                                                   | 2.6                                                                               | 2.3                                                                               | 11.8                                                                              |                                                                                     | 3.8                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s     | 0.0                                                                               | 5.5                                                                               |                                                                                   | 0.2                                                                               | 0.0                                                                               | 6.5                                                                               |                                                                                     | 0.2                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2010 Ctrl Delay         |                                                                                   |                                                                                   |                                                                                   | 9.0                                                                               |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2010 LOS                |                                                                                   |                                                                                   |                                                                                   | A                                                                                 |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

2018 PM Peak Hour  
with Project with Signal

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HCM 2010 TWSC  
4: SR29 & Las Alcobas/Pratt Ave

22/06/2016

Intersection

Int Delay, s/veh 23

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Vol, veh/h               | 8    | 3    | 8    | 60   | 4    | 20   | 17   | 785  | 70   | 20   | 980  | 7    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 5    | 0    | 5    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 100  | -    | -    | 70   | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 94   | 94   | 94   | 94   | 94   | 94   | 94   | 94   | 94   | 94   | 94   | 94   |
| Heavy Vehicles, %        | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 8    | 0    | 0    | 6    | 0    |
| Mvmt Flow                | 9    | 3    | 9    | 64   | 4    | 21   | 18   | 835  | 74   | 21   | 1043 | 7    |

| Major/Minor          | Minor2 |      |      | Minor1 |      |     | Major1 |   |   | Major2 |   |   |
|----------------------|--------|------|------|--------|------|-----|--------|---|---|--------|---|---|
| Conflicting Flow All | 2015   | 2040 | 1046 | 2009   | 2007 | 877 | 1050   | 0 | 0 | 915    | 0 | 0 |
| Stage 1              | 1089   | 1089 | -    | 914    | 914  | -   | -      | - | - | -      | - | - |
| Stage 2              | 926    | 951  | -    | 1095   | 1093 | -   | -      | - | - | -      | - | - |
| Critical Hdwy        | 7.1    | 6.5  | 6.2  | 7.1    | 6.5  | 6.2 | 4.1    | - | - | 4.1    | - | - |
| Critical Hdwy Stg 1  | 6.1    | 5.5  | -    | 6.1    | 5.5  | -   | -      | - | - | -      | - | - |
| Critical Hdwy Stg 2  | 6.1    | 5.5  | -    | 6.1    | 5.5  | -   | -      | - | - | -      | - | - |
| Follow-up Hdwy       | 3.5    | 4    | 3.3  | 3.5    | 4    | 3.3 | 2.2    | - | - | 2.2    | - | - |
| Pot Cap-1 Maneuver   | 44     | 57   | 280  | ~ 45   | 60   | 351 | 671    | - | - | 754    | - | - |
| Stage 1              | 263    | 294  | -    | 330    | 355  | -   | -      | - | - | -      | - | - |
| Stage 2              | 325    | 341  | -    | 261    | 293  | -   | -      | - | - | -      | - | - |
| Platoon blocked, %   |        |      |      |        |      |     |        | - | - |        | - | - |
| Mov Cap-1 Maneuver   | 37     | 54   | 280  | ~ 40   | 57   | 350 | 671    | - | - | 754    | - | - |
| Mov Cap-2 Maneuver   | 37     | 54   | -    | ~ 40   | 57   | -   | -      | - | - | -      | - | - |
| Stage 1              | 256    | 286  | -    | 320    | 344  | -   | -      | - | - | -      | - | - |
| Stage 2              | 293    | 330  | -    | 243    | 285  | -   | -      | - | - | -      | - | - |

| Approach             | EB   | WB       | NB  | SB  |
|----------------------|------|----------|-----|-----|
| HCM Control Delay, s | 87.1 | \$ 518.2 | 0.2 | 0.2 |
| HCM LOS              | F    | F        |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1    | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|----------|-------|-----|-----|
| Capacity (veh/h)      | 671   | -   | -   | 63    | 52       | 754   | -   | -   |
| HCM Lane V/C Ratio    | 0.027 | -   | -   | 0.321 | 1.718    | 0.028 | -   | -   |
| HCM Control Delay (s) | 10.5  | -   | -   | 87.1  | \$ 518.2 | 9.9   | -   | -   |
| HCM Lane LOS          | B     | -   | -   | F     | F        | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 1.2   | 8.6      | 0.1   | -   | -   |

Notes

~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

2035 AM Peak Hour  
without Project No Signal

Synchro 8 Report  
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HCM 2010 Signalized Intersection Summary  
4: SR29 & Las Alcobas/Pratt Ave

22/06/2016

|                             |  |  |  |  |  |  |   |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                    | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations         |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |  |  |                                                                                     |  |  |                                                                                     |
| Volume (veh/h)              | 8                                                                                 | 3                                                                                 | 8                                                                                 | 60                                                                                | 4                                                                                 | 20                                                                                | 17                                                                                  | 785                                                                                 | 70                                                                                  | 20                                                                                  | 980                                                                                 | 7                                                                                   |
| Number                      | 7                                                                                 | 4                                                                                 | 14                                                                                | 3                                                                                 | 8                                                                                 | 18                                                                                | 5                                                                                   | 2                                                                                   | 12                                                                                  | 1                                                                                   | 6                                                                                   | 16                                                                                  |
| Initial Q (Qb), veh         | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ped-Bike Adj(A_pbT)         | 0.98                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 0.93                                                                              | 1.00                                                                                |                                                                                     | 0.98                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Parking Bus, Adj            | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Adj Sat Flow, veh/h/ln      | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                                | 1770                                                                                | 1900                                                                                | 1900                                                                                | 1793                                                                                | 1900                                                                                |
| Adj Flow Rate, veh/h        | 9                                                                                 | 3                                                                                 | 9                                                                                 | 64                                                                                | 4                                                                                 | 21                                                                                | 18                                                                                  | 835                                                                                 | 74                                                                                  | 21                                                                                  | 1043                                                                                | 7                                                                                   |
| Adj No. of Lanes            | 0                                                                                 | 1                                                                                 | 0                                                                                 | 0                                                                                 | 1                                                                                 | 0                                                                                 | 1                                                                                   | 1                                                                                   | 0                                                                                   | 1                                                                                   | 1                                                                                   | 0                                                                                   |
| Peak Hour Factor            | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                |
| Percent Heavy Veh, %        | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 8                                                                                   | 8                                                                                   | 0                                                                                   | 6                                                                                   | 6                                                                                   |
| Cap, veh/h                  | 142                                                                               | 44                                                                                | 64                                                                                | 216                                                                               | 6                                                                                 | 31                                                                                | 32                                                                                  | 1051                                                                                | 93                                                                                  | 37                                                                                  | 1174                                                                                | 8                                                                                   |
| Arrive On Green             | 0.09                                                                              | 0.09                                                                              | 0.09                                                                              | 0.09                                                                              | 0.09                                                                              | 0.09                                                                              | 0.02                                                                                | 0.66                                                                                | 0.66                                                                                | 0.02                                                                                | 0.66                                                                                | 0.66                                                                                |
| Sat Flow, veh/h             | 476                                                                               | 501                                                                               | 733                                                                               | 1083                                                                              | 68                                                                                | 355                                                                               | 1810                                                                                | 1599                                                                                | 142                                                                                 | 1810                                                                                | 1779                                                                                | 12                                                                                  |
| Grp Volume(v), veh/h        | 21                                                                                | 0                                                                                 | 0                                                                                 | 89                                                                                | 0                                                                                 | 0                                                                                 | 18                                                                                  | 0                                                                                   | 909                                                                                 | 21                                                                                  | 0                                                                                   | 1050                                                                                |
| Grp Sat Flow(s),veh/h/ln    | 1709                                                                              | 0                                                                                 | 0                                                                                 | 1506                                                                              | 0                                                                                 | 0                                                                                 | 1810                                                                                | 0                                                                                   | 1741                                                                                | 1810                                                                                | 0                                                                                   | 1791                                                                                |
| Q Serve(g_s), s             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 2.3                                                                               | 0.0                                                                               | 0.0                                                                               | 0.5                                                                                 | 0.0                                                                                 | 19.1                                                                                | 0.6                                                                                 | 0.0                                                                                 | 24.6                                                                                |
| Cycle Q Clear(g_c), s       | 0.6                                                                               | 0.0                                                                               | 0.0                                                                               | 2.9                                                                               | 0.0                                                                               | 0.0                                                                               | 0.5                                                                                 | 0.0                                                                                 | 19.1                                                                                | 0.6                                                                                 | 0.0                                                                                 | 24.6                                                                                |
| Prop In Lane                | 0.43                                                                              |                                                                                   | 0.43                                                                              | 0.72                                                                              |                                                                                   | 0.24                                                                              | 1.00                                                                                |                                                                                     | 0.08                                                                                | 1.00                                                                                |                                                                                     | 0.01                                                                                |
| Lane Grp Cap(c), veh/h      | 250                                                                               | 0                                                                                 | 0                                                                                 | 253                                                                               | 0                                                                                 | 0                                                                                 | 32                                                                                  | 0                                                                                   | 1144                                                                                | 37                                                                                  | 0                                                                                   | 1182                                                                                |
| V/C Ratio(X)                | 0.08                                                                              | 0.00                                                                              | 0.00                                                                              | 0.35                                                                              | 0.00                                                                              | 0.00                                                                              | 0.56                                                                                | 0.00                                                                                | 0.79                                                                                | 0.57                                                                                | 0.00                                                                                | 0.89                                                                                |
| Avail Cap(c_a), veh/h       | 599                                                                               | 0                                                                                 | 0                                                                                 | 584                                                                               | 0                                                                                 | 0                                                                                 | 142                                                                                 | 0                                                                                   | 1299                                                                                | 142                                                                                 | 0                                                                                   | 1336                                                                                |
| HCM Platoon Ratio           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Upstream Filter(I)          | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                |
| Uniform Delay (d), s/veh    | 21.5                                                                              | 0.0                                                                               | 0.0                                                                               | 22.5                                                                              | 0.0                                                                               | 0.0                                                                               | 24.8                                                                                | 0.0                                                                                 | 6.3                                                                                 | 24.7                                                                                | 0.0                                                                                 | 7.1                                                                                 |
| Incr Delay (d2), s/veh      | 0.1                                                                               | 0.0                                                                               | 0.0                                                                               | 0.8                                                                               | 0.0                                                                               | 0.0                                                                               | 14.6                                                                                | 0.0                                                                                 | 3.1                                                                                 | 13.5                                                                                | 0.0                                                                                 | 7.1                                                                                 |
| Initial Q Delay(d3),s/veh   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln    | 0.3                                                                               | 0.0                                                                               | 0.0                                                                               | 1.3                                                                               | 0.0                                                                               | 0.0                                                                               | 0.4                                                                                 | 0.0                                                                                 | 9.8                                                                                 | 0.4                                                                                 | 0.0                                                                                 | 14.0                                                                                |
| LnGrp Delay(d),s/veh        | 21.6                                                                              | 0.0                                                                               | 0.0                                                                               | 23.3                                                                              | 0.0                                                                               | 0.0                                                                               | 39.4                                                                                | 0.0                                                                                 | 9.4                                                                                 | 38.2                                                                                | 0.0                                                                                 | 14.2                                                                                |
| LnGrp LOS                   | C                                                                                 |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | D                                                                                   |                                                                                     | A                                                                                   | D                                                                                   |                                                                                     | B                                                                                   |
| Approach Vol, veh/h         | 21                                                                                |                                                                                   |                                                                                   | 89                                                                                |                                                                                   |                                                                                   | 927                                                                                 |                                                                                     |                                                                                     | 1071                                                                                |                                                                                     |                                                                                     |
| Approach Delay, s/veh       | 21.6                                                                              |                                                                                   |                                                                                   | 23.3                                                                              |                                                                                   |                                                                                   | 10.0                                                                                |                                                                                     |                                                                                     | 14.7                                                                                |                                                                                     |                                                                                     |
| Approach LOS                | C                                                                                 |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | A                                                                                   |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |                                                                                     |
| Timer                       | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7                                                                                   | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Assigned Phs                | 1                                                                                 | 2                                                                                 |                                                                                   | 4                                                                                 | 5                                                                                 | 6                                                                                 |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s    | 5.0                                                                               | 37.5                                                                              |                                                                                   | 8.4                                                                               | 4.9                                                                               | 37.6                                                                              |                                                                                     | 8.4                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Change Period (Y+Rc), s     | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               | 4.0                                                                               |                                                                                     | 4.0                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Green Setting (Gmax),s  | 40                                                                                | 38.0                                                                              |                                                                                   | 16.0                                                                              | 4.0                                                                               | 38.0                                                                              |                                                                                     | 16.0                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1),s | 4.0                                                                               | 21.1                                                                              |                                                                                   | 2.6                                                                               | 2.5                                                                               | 26.6                                                                              |                                                                                     | 4.9                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s     | 0.0                                                                               | 9.1                                                                               |                                                                                   | 0.2                                                                               | 0.0                                                                               | 7.0                                                                               |                                                                                     | 0.2                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

Intersection Summary

|                     |      |
|---------------------|------|
| HCM 2010 Ctrl Delay | 13.0 |
| HCM 2010 LOS        | B    |

Notes

User approved pedestrian interval to be less than phase max green.

HCM 2010 TWSC  
4: SR29 & Las Alcobas/Pratt Ave

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| Intersection                                                                                                         |        |      |      |        |        |       |        |      |      |        |      |      |
|----------------------------------------------------------------------------------------------------------------------|--------|------|------|--------|--------|-------|--------|------|------|--------|------|------|
| Int Delay, s/veh                                                                                                     | 34     |      |      |        |        |       |        |      |      |        |      |      |
|                                                                                                                      |        |      |      |        |        |       |        |      |      |        |      |      |
| Movement                                                                                                             | EBL    | EBT  | EBR  | WBL    | WBT    | WBR   | NBL    | NBT  | NBR  | SBL    | SBT  | SBR  |
| Vol, veh/h                                                                                                           | 7      | 4    | 16   | 60     | 4      | 20    | 13     | 1090 | 55   | 25     | 925  | 9    |
| Conflicting Peds, #/hr                                                                                               | 0      | 0    | 0    | 5      | 0      | 5     | 0      | 0    | 0    | 0      | 0    | 0    |
| Sign Control                                                                                                         | Stop   | Stop | Stop | Stop   | Stop   | Stop  | Free   | Free | Free | Free   | Free | Free |
| RT Channelized                                                                                                       | -      | -    | None | -      | -      | None  | -      | -    | None | -      | -    | None |
| Storage Length                                                                                                       | -      | -    | -    | -      | -      | -     | 100    | -    | -    | 70     | -    | -    |
| Veh in Median Storage, #                                                                                             | -      | 0    | -    | -      | 0      | -     | -      | 0    | -    | -      | 0    | -    |
| Grade, %                                                                                                             | -      | 0    | -    | -      | 0      | -     | -      | 0    | -    | -      | 0    | -    |
| Peak Hour Factor                                                                                                     | 98     | 98   | 98   | 98     | 98     | 98    | 98     | 98   | 98   | 98     | 98   | 98   |
| Heavy Vehicles, %                                                                                                    | 0      | 0    | 0    | 0      | 0      | 0     | 0      | 8    | 0    | 0      | 6    | 0    |
| Mvmt Flow                                                                                                            | 7      | 4    | 16   | 61     | 4      | 20    | 13     | 1112 | 56   | 26     | 944  | 9    |
|                                                                                                                      |        |      |      |        |        |       |        |      |      |        |      |      |
| Major/Minor                                                                                                          | Minor2 |      |      | Minor1 |        |       | Major1 |      |      | Major2 |      |      |
| Conflicting Flow All                                                                                                 | 2183   | 2199 | 948  | 2182   | 2176   | 1145  | 953    | 0    | 0    | 1173   | 0    | 0    |
| Stage 1                                                                                                              | 999    | 999  | -    | 1172   | 1172   | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                                                                                                              | 1184   | 1200 | -    | 1010   | 1004   | -     | -      | -    | -    | -      | -    | -    |
| Critical Hdwy                                                                                                        | 7.1    | 6.5  | 6.2  | 7.1    | 6.5    | 6.2   | 4.1    | -    | -    | 4.1    | -    | -    |
| Critical Hdwy Stg 1                                                                                                  | 6.1    | 5.5  | -    | 6.1    | 5.5    | -     | -      | -    | -    | -      | -    | -    |
| Critical Hdwy Stg 2                                                                                                  | 6.1    | 5.5  | -    | 6.1    | 5.5    | -     | -      | -    | -    | -      | -    | -    |
| Follow-up Hdwy                                                                                                       | 3.5    | 4    | 3.3  | 3.5    | 4      | 3.3   | 2.2    | -    | -    | 2.2    | -    | -    |
| Pot Cap-1 Maneuver                                                                                                   | 33     | 45   | 319  | ~ 34   | 47     | 245   | 729    | -    | -    | 603    | -    | -    |
| Stage 1                                                                                                              | 296    | 324  | -    | 237    | 269    | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                                                                                                              | 233    | 261  | -    | 292    | 322    | -     | -      | -    | -    | -      | -    | -    |
| Platoon blocked, %                                                                                                   |        |      |      |        |        |       |        | -    | -    |        | -    | -    |
| Mov Cap-1 Maneuver                                                                                                   | 27     | 42   | 319  | ~ 28   | 44     | 244   | 729    | -    | -    | 603    | -    | -    |
| Mov Cap-2 Maneuver                                                                                                   | 27     | 42   | -    | ~ 28   | 44     | -     | -      | -    | -    | -      | -    | -    |
| Stage 1                                                                                                              | 291    | 310  | -    | 232    | 263    | -     | -      | -    | -    | -      | -    | -    |
| Stage 2                                                                                                              | 206    | 255  | -    | 262    | 308    | -     | -      | -    | -    | -      | -    | -    |
|                                                                                                                      |        |      |      |        |        |       |        |      |      |        |      |      |
| Approach                                                                                                             | EB     |      |      | WB     |        |       | NB     |      |      | SB     |      |      |
| HCM Control Delay, s                                                                                                 | 92.1   |      |      | \$ 867 |        |       | 0.1    |      |      | 0.3    |      |      |
| HCM LOS                                                                                                              | F      |      |      | F      |        |       |        |      |      |        |      |      |
|                                                                                                                      |        |      |      |        |        |       |        |      |      |        |      |      |
| Minor Lane/Major Mvmt                                                                                                | NBL    | NBT  | NBR  | EBLn1  | WBLn1  | SBL   | SBT    | SBR  |      |        |      |      |
| Capacity (veh/h)                                                                                                     | 729    | -    | -    | 67     | 36     | 603   | -      | -    |      |        |      |      |
| HCM Lane V/C Ratio                                                                                                   | 0.018  | -    | -    | 0.411  | 2.381  | 0.042 | -      | -    |      |        |      |      |
| HCM Control Delay (s)                                                                                                | 10     | -    | -    | 92.1   | \$ 867 | 11.2  | -      | -    |      |        |      |      |
| HCM Lane LOS                                                                                                         | B      | -    | -    | F      | F      | B     | -      | -    |      |        |      |      |
| HCM 95th %tile Q(veh)                                                                                                | 0.1    | -    | -    | 1.6    | 9.6    | 0.1   | -      | -    |      |        |      |      |
| Notes                                                                                                                |        |      |      |        |        |       |        |      |      |        |      |      |
| ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    *: All major volume in platoon |        |      |      |        |        |       |        |      |      |        |      |      |

2035 PM Peak Hour  
without Project No signal

Synchro 8 Report  
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HCM 2010 Signalized Intersection Summary  
4: SR29 & Las Alcobas/Pratt Ave

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|                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                                                           | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations                                                |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |  |  |                                                                                     |  |  |                                                                                     |
| Volume (veh/h)                                                     | 7                                                                                 | 4                                                                                 | 16                                                                                | 60                                                                                | 4                                                                                 | 20                                                                                | 13                                                                                 | 1090                                                                                | 55                                                                                  | 25                                                                                  | 925                                                                                 | 9                                                                                   |
| Number                                                             | 7                                                                                 | 4                                                                                 | 14                                                                                | 3                                                                                 | 8                                                                                 | 18                                                                                | 5                                                                                  | 2                                                                                   | 12                                                                                  | 1                                                                                   | 6                                                                                   | 16                                                                                  |
| Initial Q (Qb), veh                                                | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ped-Bike Adj(A_pbT)                                                | 0.98                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 0.93                                                                              | 1.00                                                                               |                                                                                     | 0.98                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Parking Bus, Adj                                                   | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Adj Sat Flow, veh/h/ln                                             | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                               | 1766                                                                                | 1900                                                                                | 1900                                                                                | 1793                                                                                | 1900                                                                                |
| Adj Flow Rate, veh/h                                               | 7                                                                                 | 4                                                                                 | 16                                                                                | 61                                                                                | 4                                                                                 | 20                                                                                | 13                                                                                 | 1112                                                                                | 56                                                                                  | 26                                                                                  | 944                                                                                 | 9                                                                                   |
| Adj No. of Lanes                                                   | 0                                                                                 | 1                                                                                 | 0                                                                                 | 0                                                                                 | 1                                                                                 | 0                                                                                 | 1                                                                                  | 1                                                                                   | 0                                                                                   | 1                                                                                   | 1                                                                                   | 0                                                                                   |
| Peak Hour Factor                                                   | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                               | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                |
| Percent Heavy Veh, %                                               | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 8                                                                                   | 8                                                                                   | 0                                                                                   | 6                                                                                   | 6                                                                                   |
| Cap, veh/h                                                         | 104                                                                               | 36                                                                                | 85                                                                                | 201                                                                               | 7                                                                                 | 30                                                                                | 24                                                                                 | 1128                                                                                | 57                                                                                  | 43                                                                                  | 1221                                                                                | 12                                                                                  |
| Arrive On Green                                                    | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.08                                                                              | 0.01                                                                               | 0.68                                                                                | 0.68                                                                                | 0.02                                                                                | 0.69                                                                                | 0.69                                                                                |
| Sat Flow, veh/h                                                    | 270                                                                               | 424                                                                               | 1009                                                                              | 1073                                                                              | 87                                                                                | 357                                                                               | 1810                                                                               | 1665                                                                                | 84                                                                                  | 1810                                                                                | 1774                                                                                | 17                                                                                  |
| Grp Volume(v), veh/h                                               | 27                                                                                | 0                                                                                 | 0                                                                                 | 85                                                                                | 0                                                                                 | 0                                                                                 | 13                                                                                 | 0                                                                                   | 1168                                                                                | 26                                                                                  | 0                                                                                   | 953                                                                                 |
| Grp Sat Flow(s),veh/h/ln                                           | 1703                                                                              | 0                                                                                 | 0                                                                                 | 1517                                                                              | 0                                                                                 | 0                                                                                 | 1810                                                                               | 0                                                                                   | 1748                                                                                | 1810                                                                                | 0                                                                                   | 1790                                                                                |
| Q Serve(g_s), s                                                    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 2.1                                                                               | 0.0                                                                               | 0.0                                                                               | 0.4                                                                                | 0.0                                                                                 | 36.3                                                                                | 0.8                                                                                 | 0.0                                                                                 | 19.9                                                                                |
| Cycle Q Clear(g_c), s                                              | 0.8                                                                               | 0.0                                                                               | 0.0                                                                               | 3.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.4                                                                                | 0.0                                                                                 | 36.3                                                                                | 0.8                                                                                 | 0.0                                                                                 | 19.9                                                                                |
| Prop In Lane                                                       | 0.26                                                                              |                                                                                   | 0.59                                                                              | 0.72                                                                              |                                                                                   | 0.24                                                                              | 1.00                                                                               |                                                                                     | 0.05                                                                                | 1.00                                                                                |                                                                                     | 0.01                                                                                |
| Lane Grp Cap(c), veh/h                                             | 225                                                                               | 0                                                                                 | 0                                                                                 | 238                                                                               | 0                                                                                 | 0                                                                                 | 24                                                                                 | 0                                                                                   | 1185                                                                                | 43                                                                                  | 0                                                                                   | 1233                                                                                |
| V/C Ratio(X)                                                       | 0.12                                                                              | 0.00                                                                              | 0.00                                                                              | 0.36                                                                              | 0.00                                                                              | 0.00                                                                              | 0.55                                                                               | 0.00                                                                                | 0.99                                                                                | 0.60                                                                                | 0.00                                                                                | 0.77                                                                                |
| Avail Cap(c_a), veh/h                                              | 542                                                                               | 0                                                                                 | 0                                                                                 | 530                                                                               | 0                                                                                 | 0                                                                                 | 129                                                                                | 0                                                                                   | 1185                                                                                | 129                                                                                 | 0                                                                                   | 1233                                                                                |
| HCM Platoon Ratio                                                  | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Upstream Filter(I)                                                 | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                               | 0.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                |
| Uniform Delay (d), s/veh                                           | 23.9                                                                              | 0.0                                                                               | 0.0                                                                               | 24.8                                                                              | 0.0                                                                               | 0.0                                                                               | 27.5                                                                               | 0.0                                                                                 | 8.8                                                                                 | 27.1                                                                                | 0.0                                                                                 | 5.8                                                                                 |
| Incr Delay (d2), s/veh                                             | 0.2                                                                               | 0.0                                                                               | 0.0                                                                               | 0.9                                                                               | 0.0                                                                               | 0.0                                                                               | 18.4                                                                               | 0.0                                                                                 | 22.6                                                                                | 12.9                                                                                | 0.0                                                                                 | 3.1                                                                                 |
| Initial Q Delay(d3),s/veh                                          | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln                                           | 0.4                                                                               | 0.0                                                                               | 0.0                                                                               | 1.3                                                                               | 0.0                                                                               | 0.0                                                                               | 0.3                                                                                | 0.0                                                                                 | 24.3                                                                                | 0.6                                                                                 | 0.0                                                                                 | 10.6                                                                                |
| LnGrp Delay(d),s/veh                                               | 24.1                                                                              | 0.0                                                                               | 0.0                                                                               | 25.7                                                                              | 0.0                                                                               | 0.0                                                                               | 45.9                                                                               | 0.0                                                                                 | 31.4                                                                                | 40.0                                                                                | 0.0                                                                                 | 8.9                                                                                 |
| LnGrp LOS                                                          | C                                                                                 |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | D                                                                                  |                                                                                     | C                                                                                   | D                                                                                   |                                                                                     | A                                                                                   |
| Approach Vol, veh/h                                                | 27                                                                                |                                                                                   |                                                                                   | 85                                                                                |                                                                                   |                                                                                   | 1181                                                                               |                                                                                     |                                                                                     | 979                                                                                 |                                                                                     |                                                                                     |
| Approach Delay, s/veh                                              | 24.1                                                                              |                                                                                   |                                                                                   | 25.7                                                                              |                                                                                   |                                                                                   | 31.5                                                                               |                                                                                     |                                                                                     | 9.8                                                                                 |                                                                                     |                                                                                     |
| Approach LOS                                                       | C                                                                                 |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | C                                                                                  |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |                                                                                     |
| Timer                                                              | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7                                                                                  | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Assigned Phs                                                       | 1                                                                                 | 2                                                                                 |                                                                                   | 4                                                                                 | 5                                                                                 | 6                                                                                 |                                                                                    | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s                                           | 5.3                                                                               | 42.0                                                                              |                                                                                   | 8.7                                                                               | 4.7                                                                               | 42.6                                                                              |                                                                                    | 8.7                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Change Period (Y+Rc), s                                            | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               | 4.0                                                                               |                                                                                    | 4.0                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Green Setting (Gmax),s                                         | 40.0                                                                              | 38.0                                                                              |                                                                                   | 16.0                                                                              | 4.0                                                                               | 38.0                                                                              |                                                                                    | 16.0                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1),s                                        | 4.0                                                                               | 38.3                                                                              |                                                                                   | 2.8                                                                               | 2.4                                                                               | 21.9                                                                              |                                                                                    | 5.0                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s                                            | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.2                                                                               | 0.0                                                                               | 9.9                                                                               |                                                                                    | 0.2                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Summary                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2010 Ctrl Delay                                                |                                                                                   |                                                                                   |                                                                                   | 21.8                                                                              |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2010 LOS                                                       |                                                                                   |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Notes                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| User approved pedestrian interval to be less than phase max green. |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

2035 PM Peak Hour  
without Project with Signal

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HCM 2010 TWSC  
4: SR29 & Las Alcobas/Pratt Ave

22/06/2016

| Intersection               |        |                        |      |          |          |                            |        |      |      |                                |      |      |
|----------------------------|--------|------------------------|------|----------|----------|----------------------------|--------|------|------|--------------------------------|------|------|
| Int Delay, s/veh           |        | 24.9                   |      |          |          |                            |        |      |      |                                |      |      |
|                            |        |                        |      |          |          |                            |        |      |      |                                |      |      |
| Movement                   | EBL    | EBT                    | EBR  | WBL      | WBT      | WBR                        | NBL    | NBT  | NBR  | SBL                            | SBT  | SBR  |
| Vol, veh/h                 | 8      | 3                      | 8    | 63       | 4        | 21                         | 17     | 771  | 70   | 20                             | 978  | 7    |
| Conflicting Peds, #/hr     | 0      | 0                      | 0    | 5        | 0        | 5                          | 0      | 0    | 0    | 0                              | 0    | 0    |
| Sign Control               | Stop   | Stop                   | Stop | Stop     | Stop     | Stop                       | Free   | Free | Free | Free                           | Free | Free |
| RT Channelized             | -      | -                      | None | -        | -        | None                       | -      | -    | None | -                              | -    | None |
| Storage Length             | -      | -                      | -    | -        | -        | -                          | 100    | -    | -    | 70                             | -    | -    |
| Veh in Median Storage, #   | -      | 0                      | -    | -        | 0        | -                          | -      | 0    | -    | -                              | 0    | -    |
| Grade, %                   | -      | 0                      | -    | -        | 0        | -                          | -      | 0    | -    | -                              | 0    | -    |
| Peak Hour Factor           | 94     | 94                     | 94   | 94       | 94       | 94                         | 94     | 94   | 94   | 94                             | 94   | 94   |
| Heavy Vehicles, %          | 0      | 0                      | 0    | 0        | 0        | 0                          | 0      | 8    | 0    | 0                              | 6    | 0    |
| Mvmt Flow                  | 9      | 3                      | 9    | 67       | 4        | 22                         | 18     | 820  | 74   | 21                             | 1040 | 7    |
|                            |        |                        |      |          |          |                            |        |      |      |                                |      |      |
| Major/Minor                | Minor2 |                        |      | Minor1   |          |                            | Major1 |      |      | Major2                         |      |      |
| Conflicting Flow All       | 1999   | 2023                   | 1044 | 1992     | 1989     | 862                        | 1048   | 0    | 0    | 900                            | 0    | 0    |
| Stage 1                    | 1087   | 1087                   | -    | 899      | 899      | -                          | -      | -    | -    | -                              | -    | -    |
| Stage 2                    | 912    | 936                    | -    | 1093     | 1090     | -                          | -      | -    | -    | -                              | -    | -    |
| Critical Hdwy              | 7.1    | 6.5                    | 6.2  | 7.1      | 6.5      | 6.2                        | 4.1    | -    | -    | 4.1                            | -    | -    |
| Critical Hdwy Stg 1        | 6.1    | 5.5                    | -    | 6.1      | 5.5      | -                          | -      | -    | -    | -                              | -    | -    |
| Critical Hdwy Stg 2        | 6.1    | 5.5                    | -    | 6.1      | 5.5      | -                          | -      | -    | -    | -                              | -    | -    |
| Follow-up Hdwy             | 3.5    | 4                      | 3.3  | 3.5      | 4        | 3.3                        | 2.2    | -    | -    | 2.2                            | -    | -    |
| Pot Cap-1 Maneuver         | 45     | 59                     | 281  | ~ 46     | 62       | 358                        | 672    | -    | -    | 763                            | -    | -    |
| Stage 1                    | 264    | 295                    | -    | 336      | 360      | -                          | -      | -    | -    | -                              | -    | -    |
| Stage 2                    | 331    | 346                    | -    | 262      | 294      | -                          | -      | -    | -    | -                              | -    | -    |
| Platoon blocked, %         |        |                        |      |          |          |                            |        | -    | -    |                                | -    | -    |
| Mov Cap-1 Maneuver         | 38     | 56                     | 281  | ~ 41     | 58       | 357                        | 672    | -    | -    | 763                            | -    | -    |
| Mov Cap-2 Maneuver         | 38     | 56                     | -    | ~ 41     | 58       | -                          | -      | -    | -    | -                              | -    | -    |
| Stage 1                    | 257    | 287                    | -    | 326      | 349      | -                          | -      | -    | -    | -                              | -    | -    |
| Stage 2                    | 298    | 335                    | -    | 244      | 286      | -                          | -      | -    | -    | -                              | -    | -    |
|                            |        |                        |      |          |          |                            |        |      |      |                                |      |      |
| Approach                   | EB     |                        |      | WB       |          |                            | NB     |      |      | SB                             |      |      |
| HCM Control Delay, s       | 83.6   |                        |      | \$ 534.7 |          |                            | 0.2    |      |      | 0.2                            |      |      |
| HCM LOS                    | F      |                        |      | F        |          |                            |        |      |      |                                |      |      |
|                            |        |                        |      |          |          |                            |        |      |      |                                |      |      |
| Minor Lane/Major Mvmt      | NBL    | NBT                    | NBR  | EBLn1    | WBLn1    | SBL                        | SBT    | SBR  |      |                                |      |      |
| Capacity (veh/h)           | 672    | -                      | -    | 65       | 53       | 763                        | -      | -    |      |                                |      |      |
| HCM Lane V/C Ratio         | 0.027  | -                      | -    | 0.311    | 1.766    | 0.028                      | -      | -    |      |                                |      |      |
| HCM Control Delay (s)      | 10.5   | -                      | -    | 83.6     | \$ 534.7 | 9.9                        | -      | -    |      |                                |      |      |
| HCM Lane LOS               | B      | -                      | -    | F        | F        | A                          | -      | -    |      |                                |      |      |
| HCM 95th %tile Q(veh)      | 0.1    | -                      | -    | 1.1      | 9        | 0.1                        | -      | -    |      |                                |      |      |
| Notes                      |        |                        |      |          |          |                            |        |      |      |                                |      |      |
| ~: Volume exceeds capacity |        | \$: Delay exceeds 300s |      |          |          | +: Computation Not Defined |        |      |      | *: All major volume in platoon |      |      |

2035 AM Peak Hour  
with Project No Signal

Synchro 8 Report  
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HCM 2010 Signalized Intersection Summary  
4: SR29 & Las Alcobas/Pratt Ave

22/06/2016

|                             |  |  |  |  |  |  |   |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                    | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations         |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |  |  |                                                                                     |  |  |                                                                                     |
| Volume (veh/h)              | 8                                                                                 | 3                                                                                 | 8                                                                                 | 63                                                                                | 4                                                                                 | 21                                                                                | 17                                                                                  | 771                                                                                 | 70                                                                                  | 20                                                                                  | 978                                                                                 | 7                                                                                   |
| Number                      | 7                                                                                 | 4                                                                                 | 14                                                                                | 3                                                                                 | 8                                                                                 | 18                                                                                | 5                                                                                   | 2                                                                                   | 12                                                                                  | 1                                                                                   | 6                                                                                   | 16                                                                                  |
| Initial Q (Qb), veh         | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ped-Bike Adj(A_pbT)         | 0.98                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 0.93                                                                              | 1.00                                                                                |                                                                                     | 0.98                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Parking Bus, Adj            | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Adj Sat Flow, veh/h/ln      | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                                | 1770                                                                                | 1900                                                                                | 1900                                                                                | 1793                                                                                | 1900                                                                                |
| Adj Flow Rate, veh/h        | 9                                                                                 | 3                                                                                 | 9                                                                                 | 67                                                                                | 4                                                                                 | 22                                                                                | 18                                                                                  | 820                                                                                 | 74                                                                                  | 21                                                                                  | 1040                                                                                | 7                                                                                   |
| Adj No. of Lanes            | 0                                                                                 | 1                                                                                 | 0                                                                                 | 0                                                                                 | 1                                                                                 | 0                                                                                 | 1                                                                                   | 1                                                                                   | 0                                                                                   | 1                                                                                   | 1                                                                                   | 0                                                                                   |
| Peak Hour Factor            | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                |
| Percent Heavy Veh, %        | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 8                                                                                   | 8                                                                                   | 0                                                                                   | 6                                                                                   | 6                                                                                   |
| Cap, veh/h                  | 142                                                                               | 46                                                                                | 66                                                                                | 219                                                                               | 6                                                                                 | 32                                                                                | 32                                                                                  | 1045                                                                                | 94                                                                                  | 37                                                                                  | 1169                                                                                | 8                                                                                   |
| Arrive On Green             | 0.09                                                                              | 0.09                                                                              | 0.09                                                                              | 0.09                                                                              | 0.09                                                                              | 0.09                                                                              | 0.02                                                                                | 0.65                                                                                | 0.65                                                                                | 0.02                                                                                | 0.66                                                                                | 0.66                                                                                |
| Sat Flow, veh/h             | 463                                                                               | 514                                                                               | 733                                                                               | 1083                                                                              | 66                                                                                | 356                                                                               | 1810                                                                                | 1597                                                                                | 144                                                                                 | 1810                                                                                | 1779                                                                                | 12                                                                                  |
| Grp Volume(v), veh/h        | 21                                                                                | 0                                                                                 | 0                                                                                 | 93                                                                                | 0                                                                                 | 0                                                                                 | 18                                                                                  | 0                                                                                   | 894                                                                                 | 21                                                                                  | 0                                                                                   | 1047                                                                                |
| Grp Sat Flow(s),veh/h/ln    | 1710                                                                              | 0                                                                                 | 0                                                                                 | 1504                                                                              | 0                                                                                 | 0                                                                                 | 1810                                                                                | 0                                                                                   | 1741                                                                                | 1810                                                                                | 0                                                                                   | 1791                                                                                |
| Q Serve(g_s), s             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 2.5                                                                               | 0.0                                                                               | 0.0                                                                               | 0.5                                                                                 | 0.0                                                                                 | 18.6                                                                                | 0.6                                                                                 | 0.0                                                                                 | 24.6                                                                                |
| Cycle Q Clear(g_c), s       | 0.6                                                                               | 0.0                                                                               | 0.0                                                                               | 3.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.5                                                                                 | 0.0                                                                                 | 18.6                                                                                | 0.6                                                                                 | 0.0                                                                                 | 24.6                                                                                |
| Prop In Lane                | 0.43                                                                              |                                                                                   | 0.43                                                                              | 0.72                                                                              |                                                                                   | 0.24                                                                              | 1.00                                                                                |                                                                                     | 0.08                                                                                | 1.00                                                                                |                                                                                     | 0.01                                                                                |
| Lane Grp Cap(c), veh/h      | 255                                                                               | 0                                                                                 | 0                                                                                 | 257                                                                               | 0                                                                                 | 0                                                                                 | 32                                                                                  | 0                                                                                   | 1140                                                                                | 37                                                                                  | 0                                                                                   | 1177                                                                                |
| V/C Ratio(X)                | 0.08                                                                              | 0.00                                                                              | 0.00                                                                              | 0.36                                                                              | 0.00                                                                              | 0.00                                                                              | 0.56                                                                                | 0.00                                                                                | 0.78                                                                                | 0.58                                                                                | 0.00                                                                                | 0.89                                                                                |
| Avail Cap(c_a), veh/h       | 597                                                                               | 0                                                                                 | 0                                                                                 | 582                                                                               | 0                                                                                 | 0                                                                                 | 142                                                                                 | 0                                                                                   | 1295                                                                                | 142                                                                                 | 0                                                                                   | 1332                                                                                |
| HCM Platoon Ratio           | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Upstream Filter(I)          | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                |
| Uniform Delay (d), s/veh    | 21.4                                                                              | 0.0                                                                               | 0.0                                                                               | 22.5                                                                              | 0.0                                                                               | 0.0                                                                               | 24.9                                                                                | 0.0                                                                                 | 6.3                                                                                 | 24.8                                                                                | 0.0                                                                                 | 7.2                                                                                 |
| Incr Delay (d2), s/veh      | 0.1                                                                               | 0.0                                                                               | 0.0                                                                               | 0.9                                                                               | 0.0                                                                               | 0.0                                                                               | 14.6                                                                                | 0.0                                                                                 | 2.9                                                                                 | 13.5                                                                                | 0.0                                                                                 | 7.1                                                                                 |
| Initial Q Delay(d3),s/veh   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln    | 0.3                                                                               | 0.0                                                                               | 0.0                                                                               | 1.3                                                                               | 0.0                                                                               | 0.0                                                                               | 0.4                                                                                 | 0.0                                                                                 | 9.6                                                                                 | 0.4                                                                                 | 0.0                                                                                 | 14.0                                                                                |
| LnGrp Delay(d),s/veh        | 21.5                                                                              | 0.0                                                                               | 0.0                                                                               | 23.3                                                                              | 0.0                                                                               | 0.0                                                                               | 39.5                                                                                | 0.0                                                                                 | 9.1                                                                                 | 38.3                                                                                | 0.0                                                                                 | 14.4                                                                                |
| LnGrp LOS                   | C                                                                                 |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | D                                                                                   |                                                                                     | A                                                                                   | D                                                                                   |                                                                                     | B                                                                                   |
| Approach Vol, veh/h         | 21                                                                                |                                                                                   |                                                                                   | 93                                                                                |                                                                                   |                                                                                   | 912                                                                                 |                                                                                     |                                                                                     | 1068                                                                                |                                                                                     |                                                                                     |
| Approach Delay, s/veh       | 21.5                                                                              |                                                                                   |                                                                                   | 23.3                                                                              |                                                                                   |                                                                                   | 9.7                                                                                 |                                                                                     |                                                                                     | 14.8                                                                                |                                                                                     |                                                                                     |
| Approach LOS                | C                                                                                 |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | A                                                                                   |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |                                                                                     |
| Timer                       | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7                                                                                   | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Assigned Phs                | 1                                                                                 | 2                                                                                 |                                                                                   | 4                                                                                 | 5                                                                                 | 6                                                                                 |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s    | 5.0                                                                               | 37.5                                                                              |                                                                                   | 8.6                                                                               | 4.9                                                                               | 37.6                                                                              |                                                                                     | 8.6                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Change Period (Y+Rc), s     | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               | 4.0                                                                               |                                                                                     | 4.0                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Green Setting (Gmax),s  | 40                                                                                | 38.0                                                                              |                                                                                   | 16.0                                                                              | 4.0                                                                               | 38.0                                                                              |                                                                                     | 16.0                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1),s | 4                                                                                 | 20.6                                                                              |                                                                                   | 2.6                                                                               | 2.5                                                                               | 26.6                                                                              |                                                                                     | 5.0                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s     | 0.0                                                                               | 9.1                                                                               |                                                                                   | 0.2                                                                               | 0.0                                                                               | 6.9                                                                               |                                                                                     | 0.2                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2010 Ctrl Delay         | 13.1                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2010 LOS                | B                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

2035 AM Peak Hour  
with Project with Signal

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HCM 2010 TWSC  
4: SR29 & Las Alcobas/Pratt Ave

22/06/2016

| Intersection               |        |                        |      |          |          |                            |        |      |      |                                |      |      |
|----------------------------|--------|------------------------|------|----------|----------|----------------------------|--------|------|------|--------------------------------|------|------|
| Int Delay, s/veh           |        | 36.3                   |      |          |          |                            |        |      |      |                                |      |      |
|                            |        |                        |      |          |          |                            |        |      |      |                                |      |      |
| Movement                   | EBL    | EBT                    | EBR  | WBL      | WBT      | WBR                        | NBL    | NBT  | NBR  | SBL                            | SBT  | SBR  |
| Vol, veh/h                 | 7      | 4                      | 16   | 63       | 4        | 21                         | 13     | 1083 | 59   | 25                             | 910  | 9    |
| Conflicting Peds, #/hr     | 0      | 0                      | 0    | 5        | 0        | 5                          | 0      | 0    | 0    | 0                              | 0    | 0    |
| Sign Control               | Stop   | Stop                   | Stop | Stop     | Stop     | Stop                       | Free   | Free | Free | Free                           | Free | Free |
| RT Channelized             | -      | -                      | None | -        | -        | None                       | -      | -    | None | -                              | -    | None |
| Storage Length             | -      | -                      | -    | -        | -        | -                          | 100    | -    | -    | 70                             | -    | -    |
| Veh in Median Storage, #   | -      | 0                      | -    | -        | 0        | -                          | -      | 0    | -    | -                              | 0    | -    |
| Grade, %                   | -      | 0                      | -    | -        | 0        | -                          | -      | 0    | -    | -                              | 0    | -    |
| Peak Hour Factor           | 98     | 98                     | 98   | 98       | 98       | 98                         | 98     | 98   | 98   | 98                             | 98   | 98   |
| Heavy Vehicles, %          | 0      | 0                      | 0    | 0        | 0        | 0                          | 0      | 8    | 0    | 0                              | 6    | 0    |
| Mvmt Flow                  | 7      | 4                      | 16   | 64       | 4        | 21                         | 13     | 1105 | 60   | 26                             | 929  | 9    |
|                            |        |                        |      |          |          |                            |        |      |      |                                |      |      |
| Major/Minor                | Minor2 |                        |      | Minor1   |          |                            | Major1 |      |      | Major2                         |      |      |
| Conflicting Flow All       | 2163   | 2181                   | 933  | 2161     | 2156     | 1140                       | 938    | 0    | 0    | 1170                           | 0    | 0    |
| Stage 1                    | 984    | 984                    | -    | 1167     | 1167     | -                          | -      | -    | -    | -                              | -    | -    |
| Stage 2                    | 1179   | 1197                   | -    | 994      | 989      | -                          | -      | -    | -    | -                              | -    | -    |
| Critical Hdwy              | 7.1    | 6.5                    | 6.2  | 7.1      | 6.5      | 6.2                        | 4.1    | -    | -    | 4.1                            | -    | -    |
| Critical Hdwy Stg 1        | 6.1    | 5.5                    | -    | 6.1      | 5.5      | -                          | -      | -    | -    | -                              | -    | -    |
| Critical Hdwy Stg 2        | 6.1    | 5.5                    | -    | 6.1      | 5.5      | -                          | -      | -    | -    | -                              | -    | -    |
| Follow-up Hdwy             | 3.5    | 4                      | 3.3  | 3.5      | 4        | 3.3                        | 2.2    | -    | -    | 2.2                            | -    | -    |
| Pot Cap-1 Maneuver         | 35     | 47                     | 325  | ~ 35     | 48       | 247                        | 739    | -    | -    | 604                            | -    | -    |
| Stage 1                    | 302    | 329                    | -    | 238      | 270      | -                          | -      | -    | -    | -                              | -    | -    |
| Stage 2                    | 234    | 261                    | -    | 298      | 327      | -                          | -      | -    | -    | -                              | -    | -    |
| Platoon blocked, %         |        |                        |      |          |          |                            |        | -    | -    |                                | -    | -    |
| Mov Cap-1 Maneuver         | 28     | 44                     | 325  | ~ 29     | 45       | 246                        | 739    | -    | -    | 604                            | -    | -    |
| Mov Cap-2 Maneuver         | 28     | 44                     | -    | ~ 29     | 45       | -                          | -      | -    | -    | -                              | -    | -    |
| Stage 1                    | 297    | 315                    | -    | 233      | 264      | -                          | -      | -    | -    | -                              | -    | -    |
| Stage 2                    | 207    | 255                    | -    | 267      | 313      | -                          | -      | -    | -    | -                              | -    | -    |
|                            |        |                        |      |          |          |                            |        |      |      |                                |      |      |
| Approach                   | EB     |                        |      | WB       |          |                            | NB     |      |      | SB                             |      |      |
| HCM Control Delay, s       | 88.3   |                        |      | \$ 880.9 |          |                            | 0.1    |      |      | 0.3                            |      |      |
| HCM LOS                    | F      |                        |      | F        |          |                            |        |      |      |                                |      |      |
|                            |        |                        |      |          |          |                            |        |      |      |                                |      |      |
| Minor Lane/Major Mvmt      | NBL    | NBT                    | NBR  | EBLn1    | WBLn1    | SBL                        | SBT    | SBR  |      |                                |      |      |
| Capacity (veh/h)           | 739    | -                      | -    | 69       | 37       | 604                        | -      | -    |      |                                |      |      |
| HCM Lane V/C Ratio         | 0.018  | -                      | -    | 0.399    | 2.427    | 0.042                      | -      | -    |      |                                |      |      |
| HCM Control Delay (s)      | 10     | -                      | -    | \$ 880.9 | \$ 880.9 | 11.2                       | -      | -    |      |                                |      |      |
| HCM Lane LOS               | A      | -                      | -    | F        | F        | B                          | -      | -    |      |                                |      |      |
| HCM 95th %tile Q(veh)      | 0.1    | -                      | -    | 1.5      | 10       | 0.1                        | -      | -    |      |                                |      |      |
| Notes                      |        |                        |      |          |          |                            |        |      |      |                                |      |      |
| ~: Volume exceeds capacity |        | \$: Delay exceeds 300s |      |          |          | +: Computation Not Defined |        |      |      | *: All major volume in platoon |      |      |

2035 PM Peak Hour  
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HCM 2010 Signalized Intersection Summary  
4: SR29 & Las Alcobas/Pratt Ave

22/06/2016

|                                                                    |  |  |  |  |  |  |   |  |  |  |  |  |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                                                           | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations                                                |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |  |  |                                                                                     |  |  |                                                                                     |
| Volume (veh/h)                                                     | 7                                                                                 | 4                                                                                 | 16                                                                                | 63                                                                                | 4                                                                                 | 21                                                                                | 13                                                                                  | 1083                                                                                | 59                                                                                  | 25                                                                                  | 910                                                                                 | 9                                                                                   |
| Number                                                             | 7                                                                                 | 4                                                                                 | 14                                                                                | 3                                                                                 | 8                                                                                 | 18                                                                                | 5                                                                                   | 2                                                                                   | 12                                                                                  | 1                                                                                   | 6                                                                                   | 16                                                                                  |
| Initial Q (Qb), veh                                                | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ped-Bike Adj(A_pbT)                                                | 0.98                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 0.93                                                                              | 1.00                                                                                |                                                                                     | 0.98                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Parking Bus, Adj                                                   | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Adj Sat Flow, veh/h/ln                                             | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                                | 1766                                                                                | 1900                                                                                | 1900                                                                                | 1793                                                                                | 1900                                                                                |
| Adj Flow Rate, veh/h                                               | 7                                                                                 | 4                                                                                 | 16                                                                                | 64                                                                                | 4                                                                                 | 21                                                                                | 13                                                                                  | 1105                                                                                | 60                                                                                  | 26                                                                                  | 929                                                                                 | 9                                                                                   |
| Adj No. of Lanes                                                   | 0                                                                                 | 1                                                                                 | 0                                                                                 | 0                                                                                 | 1                                                                                 | 0                                                                                 | 1                                                                                   | 1                                                                                   | 0                                                                                   | 1                                                                                   | 1                                                                                   | 0                                                                                   |
| Peak Hour Factor                                                   | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                |
| Percent Heavy Veh, %                                               | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 8                                                                                   | 8                                                                                   | 0                                                                                   | 6                                                                                   | 6                                                                                   |
| Cap, veh/h                                                         | 104                                                                               | 38                                                                                | 88                                                                                | 203                                                                               | 8                                                                                 | 31                                                                                | 24                                                                                  | 1120                                                                                | 61                                                                                  | 43                                                                                  | 1217                                                                                | 12                                                                                  |
| Arrive On Green                                                    | 0.09                                                                              | 0.09                                                                              | 0.09                                                                              | 0.09                                                                              | 0.09                                                                              | 0.09                                                                              | 0.01                                                                                | 0.68                                                                                | 0.68                                                                                | 0.02                                                                                | 0.69                                                                                | 0.69                                                                                |
| Sat Flow, veh/h                                                    | 263                                                                               | 431                                                                               | 1009                                                                              | 1067                                                                              | 90                                                                                | 357                                                                               | 1810                                                                                | 1658                                                                                | 90                                                                                  | 1810                                                                                | 1773                                                                                | 17                                                                                  |
| Grp Volume(v), veh/h                                               | 27                                                                                | 0                                                                                 | 0                                                                                 | 89                                                                                | 0                                                                                 | 0                                                                                 | 13                                                                                  | 0                                                                                   | 1165                                                                                | 26                                                                                  | 0                                                                                   | 938                                                                                 |
| Grp Sat Flow(s),veh/h/ln                                           | 1703                                                                              | 0                                                                                 | 0                                                                                 | 1514                                                                              | 0                                                                                 | 0                                                                                 | 1810                                                                                | 0                                                                                   | 1748                                                                                | 1810                                                                                | 0                                                                                   | 1790                                                                                |
| Q Serve(g_s), s                                                    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 2.3                                                                               | 0.0                                                                               | 0.0                                                                               | 0.4                                                                                 | 0.0                                                                                 | 36.5                                                                                | 0.8                                                                                 | 0.0                                                                                 | 19.4                                                                                |
| Cycle Q Clear(g_c), s                                              | 0.8                                                                               | 0.0                                                                               | 0.0                                                                               | 3.1                                                                               | 0.0                                                                               | 0.0                                                                               | 0.4                                                                                 | 0.0                                                                                 | 36.5                                                                                | 0.8                                                                                 | 0.0                                                                                 | 19.4                                                                                |
| Prop In Lane                                                       | 0.26                                                                              |                                                                                   | 0.59                                                                              | 0.72                                                                              |                                                                                   | 0.24                                                                              | 1.00                                                                                |                                                                                     | 0.05                                                                                | 1.00                                                                                |                                                                                     | 0.01                                                                                |
| Lane Grp Cap(c), veh/h                                             | 230                                                                               | 0                                                                                 | 0                                                                                 | 243                                                                               | 0                                                                                 | 0                                                                                 | 24                                                                                  | 0                                                                                   | 1180                                                                                | 43                                                                                  | 0                                                                                   | 1228                                                                                |
| V/C Ratio(X)                                                       | 0.12                                                                              | 0.00                                                                              | 0.00                                                                              | 0.37                                                                              | 0.00                                                                              | 0.00                                                                              | 0.55                                                                                | 0.00                                                                                | 0.99                                                                                | 0.61                                                                                | 0.00                                                                                | 0.76                                                                                |
| Avail Cap(c_a), veh/h                                              | 541                                                                               | 0                                                                                 | 0                                                                                 | 528                                                                               | 0                                                                                 | 0                                                                                 | 129                                                                                 | 0                                                                                   | 1180                                                                                | 129                                                                                 | 0                                                                                   | 1228                                                                                |
| HCM Platoon Ratio                                                  | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Upstream Filter(I)                                                 | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                |
| Uniform Delay (d), s/veh                                           | 23.8                                                                              | 0.0                                                                               | 0.0                                                                               | 24.8                                                                              | 0.0                                                                               | 0.0                                                                               | 27.6                                                                                | 0.0                                                                                 | 8.9                                                                                 | 27.2                                                                                | 0.0                                                                                 | 5.8                                                                                 |
| Incr Delay (d2), s/veh                                             | 0.2                                                                               | 0.0                                                                               | 0.0                                                                               | 0.9                                                                               | 0.0                                                                               | 0.0                                                                               | 18.4                                                                                | 0.0                                                                                 | 23.3                                                                                | 12.9                                                                                | 0.0                                                                                 | 4.5                                                                                 |
| Initial Q Delay(d3),s/veh                                          | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln                                           | 0.4                                                                               | 0.0                                                                               | 0.0                                                                               | 1.4                                                                               | 0.0                                                                               | 0.0                                                                               | 0.3                                                                                 | 0.0                                                                                 | 24.5                                                                                | 0.6                                                                                 | 0.0                                                                                 | 10.9                                                                                |
| LnGrp Delay(d),s/veh                                               | 24.0                                                                              | 0.0                                                                               | 0.0                                                                               | 25.7                                                                              | 0.0                                                                               | 0.0                                                                               | 46.0                                                                                | 0.0                                                                                 | 32.1                                                                                | 40.1                                                                                | 0.0                                                                                 | 10.4                                                                                |
| LnGrp LOS                                                          | C                                                                                 |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | D                                                                                   |                                                                                     | C                                                                                   | D                                                                                   |                                                                                     | B                                                                                   |
| Approach Vol, veh/h                                                | 27                                                                                |                                                                                   |                                                                                   | 89                                                                                |                                                                                   |                                                                                   | 1178                                                                                |                                                                                     |                                                                                     | 964                                                                                 |                                                                                     |                                                                                     |
| Approach Delay, s/veh                                              | 24.0                                                                              |                                                                                   |                                                                                   | 25.7                                                                              |                                                                                   |                                                                                   | 32.3                                                                                |                                                                                     |                                                                                     | 11.2                                                                                |                                                                                     |                                                                                     |
| Approach LOS                                                       | C                                                                                 |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | C                                                                                   |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |                                                                                     |
| Timer                                                              | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7                                                                                   | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Assigned Phs                                                       | 1                                                                                 | 2                                                                                 |                                                                                   | 4                                                                                 | 5                                                                                 | 6                                                                                 |                                                                                     | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s                                           | 5.3                                                                               | 42.0                                                                              |                                                                                   | 8.9                                                                               | 4.7                                                                               | 42.6                                                                              |                                                                                     | 8.9                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Change Period (Y+Rc), s                                            | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               | 4.0                                                                               |                                                                                     | 4.0                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Green Setting (Gmax),s                                         | 40.0                                                                              | 38.0                                                                              |                                                                                   | 16.0                                                                              | 4.0                                                                               | 38.0                                                                              |                                                                                     | 16.0                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1),s                                        | 4.0                                                                               | 38.5                                                                              |                                                                                   | 2.8                                                                               | 2.4                                                                               | 21.4                                                                              |                                                                                     | 5.1                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s                                            | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.3                                                                               | 0.0                                                                               | 10.0                                                                              |                                                                                     | 0.2                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Summary                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2010 Ctrl Delay                                                | 22.9                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2010 LOS                                                       | C                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Notes                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| User approved pedestrian interval to be less than phase max green. |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

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## **SIGNAL WARRANTS**

## Appendix

### SIGNAL WARRANT DEFINITIONS (California Manual on Uniform Traffic Control Devices\*)

#### Section 4C.02 Warrant 1, Eight-Hour Vehicular Volume

##### Support:

The Minimum Vehicular Volume, Condition A, is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal.

The Interruption of Continuous Traffic, Condition B, is intended for application at locations where Condition A is not satisfied and where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street.

It is intended that Warrant 1 be treated as a single warrant. If Condition A is satisfied, then the criteria for Warrant 1 is satisfied and Condition B and the combination of Conditions A and B are not needed. Similarly, if Condition B is satisfied, then the criteria for Warrant 1 is satisfied and the combination of Conditions A and B is not needed.

##### Standard:

**The need for a traffic control signal shall be considered if an engineering study finds that one of the following conditions exist for each of any 8 hours of an average day:**

- A. The vehicles per hour given in both of the 100 percent columns of Condition A in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection; or**
- B. The vehicles per hour given in both of the 100 percent columns of Condition B in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection.**

**In applying each condition the major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of these 8 hours.**

##### Option:

If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 64 km/h or exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, the traffic volumes in the 70 percent columns in Table 4C-1 may be used in place of the 100 percent columns.

##### Guidance:

The combination of Conditions A and B is intended for application at locations where Condition A is not satisfied and Condition B is not satisfied and should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.

##### Standard:

**The need for a traffic control signal shall be considered if an engineering study finds that one of the following conditions exist for each of any 8 hours of an average day:**

- A. The vehicles per hour given in both of the 80 percent columns of Condition A in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection; and**

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\* FHWA's MUTCD 2014 edition (FHWA's MUTCD 2009 Edition, including Revisions 1 & 2, as amended for use in California)

- B. The vehicles per hour given in both of the 80 percent columns of Condition B in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection.**

**These major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied in Condition A shall not be required to be the same 8 hours satisfied in Condition B. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.**

Option:

If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 64 km/h or exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, the traffic volumes in the 56 percent columns in Table 4C-1 may be used in place of the 80 percent columns.

### **Section 4C.04 Warrant 3, Peak Hour**

Support:

The Peak Hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street.

**Standard:**

**This signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.**

**The need for a traffic control signal shall be considered if an engineering study finds that the criteria in either of the following two categories are met:**

- A. If all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:**
- 1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and**
  - 2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and**
  - 3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.**
- B. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day falls above the applicable curve in Figure 4C-3 for the existing combination of approach lanes.**

Option:

If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 64 km/h or exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, Figure 4C-4 may be used in place of Figure 4C-3 to satisfy the criteria in the second category of the Standard.

### **Section 4C.08 Warrant 7, Crash Experience**

Support:

The Crash Experience signal warrant conditions are intended for application where the severity and frequency of crashes are the principal reasons to consider installing a traffic control signal.

Standard:

The need for a traffic control signal shall be considered if an engineering study finds that all of the following criteria are met:

- A. Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency; and**
- B. Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash; and**
- C. For each of any 8 hours of an average day, the vehicles per hour (vph) given in both of the 80 percent columns of Condition A in Table 4C-1 (see Section 4C.02), or the vph in both of the 80 percent columns of Condition B in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80 percent of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.**

Option:

If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, the traffic volumes in the 56 percent columns in Table 4C-1 may be used in place of the 80 percent columns.

*Source: California MUTCD, Chapter 4C – Traffic Control Signal Needs Studies*

Table A-1

**S.R.29-128 (Main Street)/PRATT AVENUE INTERSECTION  
SIGNAL WARRANT #1 EVALUATION**

**8 HIGHEST TRAFFIC VOLUME HOURS**

**EXISTING SUMMER VOLUMES**

|                                                      | 4:00-<br>5:00 PM | 3:00-<br>4:00 PM | 5:00-<br>6:00 PM | 2:00-<br>3:00 PM | 1:00-2:00<br>PM | Noon-<br>1:00 PM | 10:00 –<br>11:00 AM | 8:00 –<br>9:00 AM |
|------------------------------------------------------|------------------|------------------|------------------|------------------|-----------------|------------------|---------------------|-------------------|
| Sum of S.R.29-<br>128 (Main<br>Street)<br>Approaches | 1345             | 1288             | 1281             | 1143             | 1142            | 1035             | 1035                | 1005              |
| Pratt Avenue<br>Approach                             | 84               | 91               | 51               | 72               | 57              | 69               | 51                  | 64                |

**EXISTING SUMMER + PROJECT VOLUMES**

|                                                      | 4:00-<br>5:00 PM | 3:00-<br>4:00 PM | 5:00-<br>6:00 PM | 2:00-<br>3:00 PM | 1:00-2:00<br>PM | Noon-<br>1:00 PM | 10:00 –<br>11:00 AM | 8:00 –<br>9:00 AM |
|------------------------------------------------------|------------------|------------------|------------------|------------------|-----------------|------------------|---------------------|-------------------|
| Sum of S.R.29-<br>128 (Main<br>Street)<br>Approaches | 1345             | 1288             | 1281             | 1143             | 1142            | 1035             | 1035                | 1005              |
| Pratt Avenue<br>Approach                             | 88               | 95               | 55               | 76               | 61              | 73               | 55                  | 68                |

**YEAR 2018 VOLUMES**

**(The Pratt Avenue approach shows the additional  
Las Alcobas Hotel volumes: 4 westbound vehicles)**

|                                                   | 4:00-5:00<br>PM | 5:00-<br>6:00 PM | 3:00-<br>4:00 PM | 2:00-<br>3:00 PM | 8:00-<br>9:00 AM | Noon-<br>1:00 PM | 11:00<br>AM-Noon | 1:00-<br>2:00 PM |
|---------------------------------------------------|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Sum of S.R.29-<br>128 (Main Street)<br>Approaches | 1418            | 1359             | 1351             | 1209             | 1209             | 1096             | 1096             | 1065             |
| Pratt Avenue<br>Approach                          | 88              | 95               | 55               | 72               | 57               | 69               | 51               | 64               |

**YEAR 2018 + PROJECT VOLUMES**  
**(The Project adds an additional 4 westbound vehicles**  
**to the Pratt Avenue Approach)**

|                                                   | 4:00-5:00<br>PM | 5:00-<br>6:00 PM | 3:00-<br>4:00 PM | 2:00-<br>3:00 PM | 8:00-<br>9:00 AM | Noon-<br>1:00 PM | 11:00<br>AM-Noon | 1:00-<br>2:00<br>PM |
|---------------------------------------------------|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|---------------------|
| Sum of S.R.29-<br>128 (Main Street)<br>Approaches | 1397            | 1338             | 1330             | 1188             | 1193             | 1075             | 1080             | 1044                |
| Pratt Avenue<br>Approach                          | 92              | 99               | 59               | 76               | 61               | 73               | 55               | 69                  |

**YEAR 2035 VOLUMES**

|                                                   | 4:00-5:00<br>PM | 5:00-<br>6:00 PM | 3:00-<br>4:00 PM | 2:00-<br>3:00 PM | 8:00-<br>9:00 AM | Noon-<br>1:00 PM | 11:00<br>AM-Noon | 1:00-<br>2:00 PM |
|---------------------------------------------------|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Sum of S.R.29-<br>128 (Main Street)<br>Approaches | 2078            | 1991             | 1980             | 1773             | 1847             | 1745             | 1745             | 1561             |
| Pratt Avenue<br>Approach                          | 88              | 95               | 55               | 72               | 57               | 69               | 51               | 64               |

**YEAR 2035 + PROJECT VOLUMES**  
**(The Project adds an additional 4 westbound vehicles**  
**to the Pratt Avenue Approach)**

|                                                   | 4:00-5:00<br>PM | 5:00-<br>6:00 PM | 3:00-<br>4:00 PM | 2:00-<br>3:00 PM | 8:00-<br>9:00 AM | Noon-<br>1:00 PM | 11:00<br>AM-Noon | 1:00-<br>2:00 PM |
|---------------------------------------------------|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Sum of S.R.29-<br>128 (Main Street)<br>Approaches | 2149            | 1970             | 1959             | 1752             | 1831             | 1724             | 1729             | 1540             |
| Pratt Avenue<br>Approach                          | 92              | 99               | 59               | 76               | 61               | 73               | 55               | 69               |

**WARRANT #1 VOLUME CRITERIA LEVELS**  
**SINGLE LANE MAJOR STREET APPROACHES AND**  
**SINGLE LANE SIDE STREET APPROACH**

|                               | <b>CONDITION A<br/>MINIMUM<br/>VOLUME<br/>@ 100%</b> | <b>CONDITION B<br/>INTERRUPTION OF<br/>CONTINUOUS<br/>TRAFFIC<br/>@ 100%</b> |
|-------------------------------|------------------------------------------------------|------------------------------------------------------------------------------|
| Total Major Street Approaches | 500                                                  | 750                                                                          |
| Minor Street Approach         | 150                                                  | 75                                                                           |



|                                  | <b>CONDITION A<br/>MINIMUM<br/>VOLUME<br/>@ 80%</b> | <b>CONDITION B<br/>INTERRUPTION OF<br/>CONTINUOUS<br/>TRAFFIC @ 80%</b> |
|----------------------------------|-----------------------------------------------------|-------------------------------------------------------------------------|
| Total of Major Street Approaches | 400                                                 | 600                                                                     |
| Minor Street Approach            | 120                                                 | 60                                                                      |

Source: California MUTCD, Chapter 4C – Traffic Control Signal Needs Studies (see Table 4C-1, below)  
Compiled by Crane Transportation Group

### Appendix

## California MUTCD Table 4C-1

### WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME

| <b>Condition A – Minimum Vehicular Volume</b>       |              |                                                              |                  |                  |                  |                                                                               |                  |                  |                  |
|-----------------------------------------------------|--------------|--------------------------------------------------------------|------------------|------------------|------------------|-------------------------------------------------------------------------------|------------------|------------------|------------------|
| Number of lanes for moving traffic on each approach |              | Vehicles per hour on major street (total of both approaches) |                  |                  |                  | Vehicles per hour on higher-volume minor-street approach (one direction only) |                  |                  |                  |
| Major Street                                        | Minor Street | 100% <sup>a</sup>                                            | 80% <sup>b</sup> | 70% <sup>c</sup> | 56% <sup>d</sup> | 100% <sup>a</sup>                                                             | 80% <sup>b</sup> | 70% <sup>c</sup> | 56% <sup>d</sup> |
| 1.....                                              | 1.....       | <b>500</b>                                                   | <b>400</b>       | 350              | 280              | <b>150</b>                                                                    | <b>120</b>       | 105              | 84               |
| 2 or more                                           | 1.....       | 600                                                          | 480              | 420              | 336              | 150                                                                           | 120              | 105              | 84               |
| 2 or more                                           | 2 or more    | 600                                                          | 480              | 420              | 336              | 200                                                                           | 160              | 140              | 112              |
| 1.....                                              | 2 or more    | 500                                                          | 400              | 350              | 280              | 200                                                                           | 160              | 140              | 112              |

| <b>Condition B – Interruption of Continuous Traffic</b> |              |                                                              |                  |                  |                  |                                                                               |                  |                  |                  |
|---------------------------------------------------------|--------------|--------------------------------------------------------------|------------------|------------------|------------------|-------------------------------------------------------------------------------|------------------|------------------|------------------|
| Number of lanes for moving traffic on each approach     |              | Vehicles per hour on major street (total of both approaches) |                  |                  |                  | Vehicles per hour on higher-volume minor-street approach (one direction only) |                  |                  |                  |
| Major Street                                            | Minor Street | 100% <sup>a</sup>                                            | 80% <sup>b</sup> | 70% <sup>c</sup> | 56% <sup>d</sup> | 100% <sup>a</sup>                                                             | 80% <sup>b</sup> | 70% <sup>c</sup> | 56% <sup>d</sup> |
| 1.....                                                  | 1.....       | <b>750</b>                                                   | <b>600</b>       | 525              | 420              | <b>75</b>                                                                     | <b>60</b>        | 53               | 42               |
| 2 or more                                               | 1.....       | 900                                                          | 720              | 630              | 504              | 75                                                                            | 60               | 53               | 42               |
| 2 or more                                               | 2 or more    | 900                                                          | 720              | 630              | 504              | 100                                                                           | 80               | 70               | 56               |
| 1.....                                                  | 2 or more    | 750                                                          | 600              | 525              | 420              | 100                                                                           | 80               | 70               | 56               |

- a. Basic minimum hourly volume.
- b. Used for combination of Conditions A and B after adequate trial of other remedial measures.
- c. May be used when the major-street speed exceeds 64 km/h or exceeds 40 mph or in an isolated community with a population of less than 10,000.
- d. May be used for combination of Conditions A and B after adequate trial of other remedial measures when the major-street speed exceeds 64 km/h or exceeds 40 mph or in an isolated community with a population of less than 10,000.

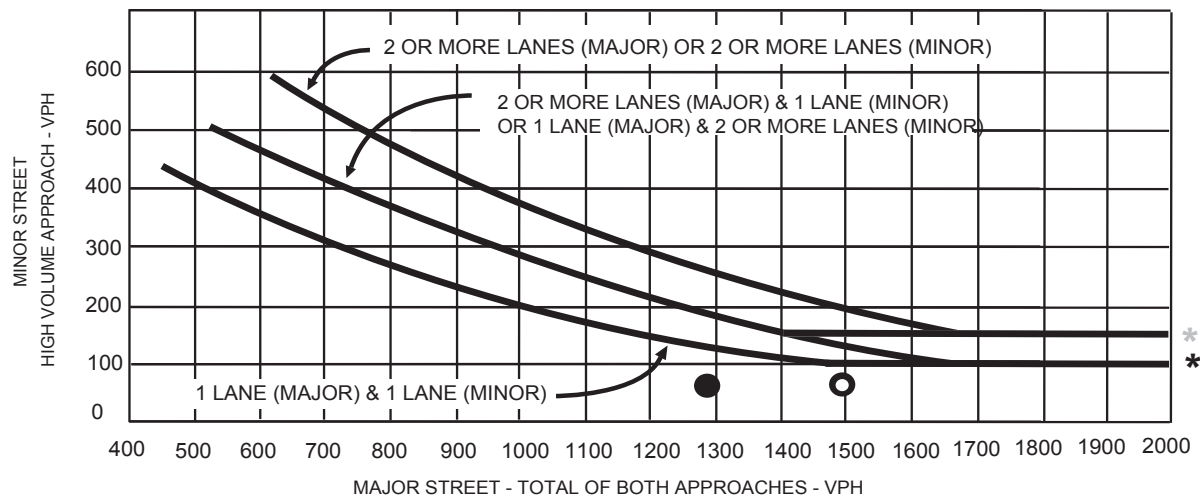
Source: California MUTCD, Chapter 4C – Traffic Control Signal Needs Studies



## Pratt Avenue/Main St (SR29-128)

### PEAK HOUR VOLUME WARRANT #3

Urban Area



#### 2016 Weekday AM Peak Hour with Project

71 vehicles minor approach  
1285 vehicles major approaches

#### 2016 Weekday PM Peak Hour with Project

70 vehicles minor approach  
1493 vehicles major approaches

#### \* NOTE

150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE

Source: Year 2010 Manual on Uniform Traffic Control Devices, Federal Highway Administration



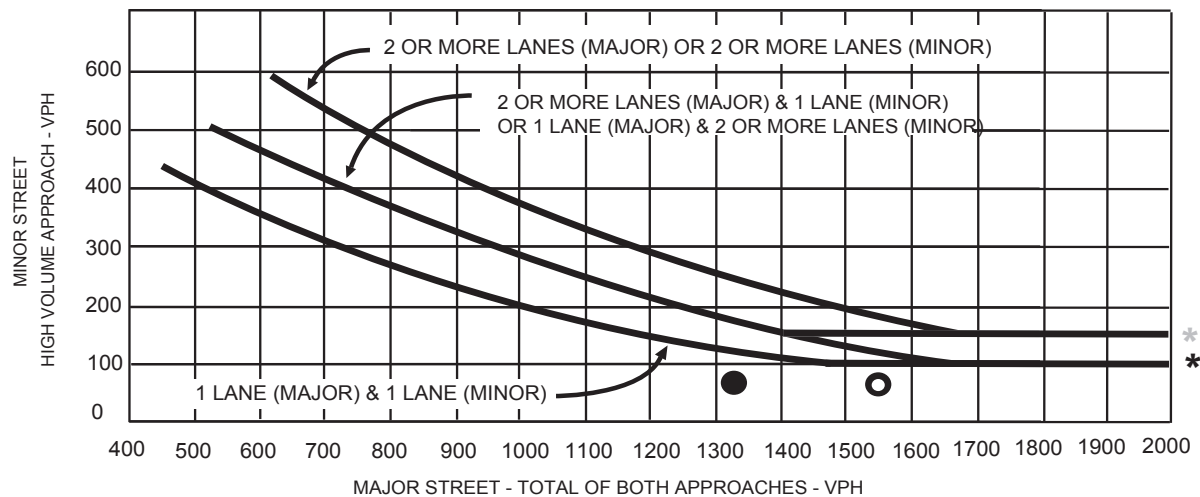
CRANE TRANSPORTATION GROUP

**Appendix Figure 1**  
**Pratt Ave/Main St (SR29-128)**  
**Existing AM and PM With Project**  
**Signal Warrant #3**

## Pratt Avenue/Main St (SR29-128)

### PEAK HOUR VOLUME WARRANT #3

Urban Area



#### 2018 Weekday AM Peak Hour with Project

● 74 vehicles minor approach  
1337 vehicles major approaches

#### 2018 Weekday PM Peak Hour with Project

○ 72 vehicles minor approach  
1554 vehicles major approaches

#### \* NOTE

150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE

Source: Year 2010 Manual on Uniform Traffic Control Devices, Federal Highway Administration



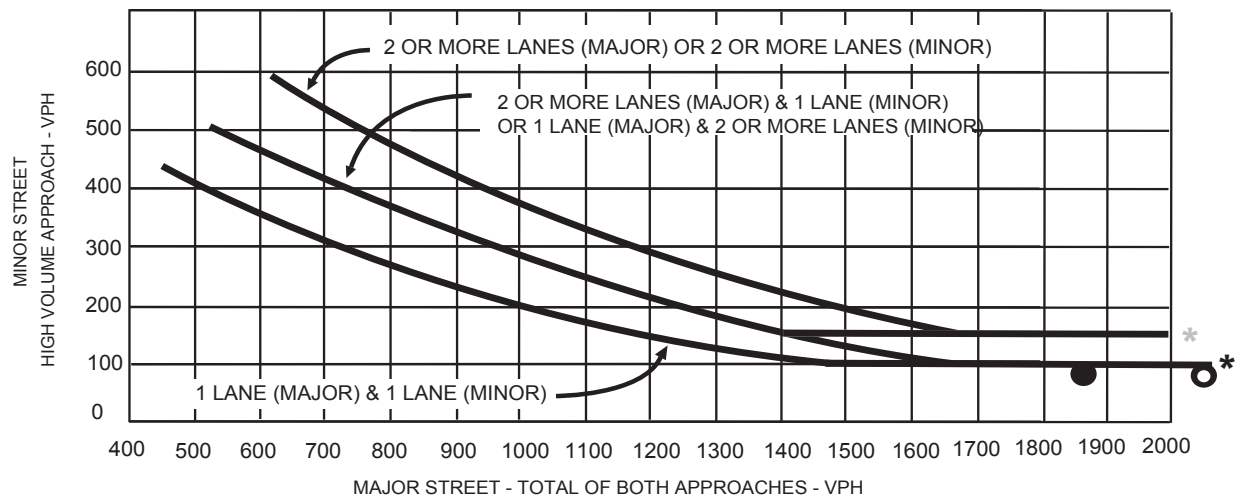
CRANE TRANSPORTATION GROUP

**Appendix Figure 2**  
**Pratt Ave/Main St (SR29-128)**  
**2018 AM and PM With Project**  
**Signal Warrant #3**

## Pratt Avenue/Main St (SR29-128)

### PEAK HOUR VOLUME WARRANT #3

Urban Area



#### 2035 Weekday AM Peak Hour with Project

● 89 vehicles minor approach  
1873 vehicles major approaches

#### 2035 Weekday PM Peak Hour with Project

○ 89 vehicles minor approach  
2099 vehicles major approaches

#### \* NOTE

150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE

Source: Year 2010 Manual on Uniform Traffic Control Devices, Federal Highway Administration



CRANE TRANSPORTATION GROUP

**Appendix Figure 3**  
**Pratt Ave/Main St (SR29-128)**  
**2035 AM and PM With Project**  
**Signal Warrant #3**

## **8 HOURS TRAFFIC COUNT DATA**

|             | Southbound |       |       |        |           | Westbound |      |       |        |           | Northbound |       |       |        |           | Eastbound |       |       |        |           |        |             |
|-------------|------------|-------|-------|--------|-----------|-----------|------|-------|--------|-----------|------------|-------|-------|--------|-----------|-----------|-------|-------|--------|-----------|--------|-------------|
| START TIME  | LEFT       | THRU  | RIGHT | UTURNS | APP.TOTAL | LEFT      | THRU | RIGHT | UTURNS | APP.TOTAL | LEFT       | THRU  | RIGHT | UTURNS | APP.TOTAL | LEFT      | THRU  | RIGHT | UTURNS | APP.TOTAL | Total  | Utums Total |
| 7:00        | 3          | 96    | 0     | 0      | 99        | 1         | 1    | 6     | 0      | 8         | 3          | 70    | 6     | 0      | 79        | 2         | 2     | 1     | 0      | 5         | 191    | 0           |
| 7:15        | 4          | 104   | 0     | 0      | 108       | 3         | 1    | 2     | 0      | 6         | 1          | 90    | 3     | 0      | 94        | 0         | 0     | 0     | 0      | 0         | 208    | 0           |
| 7:30        | 6          | 120   | 0     | 0      | 126       | 8         | 0    | 7     | 0      | 15        | 0          | 93    | 6     | 0      | 99        | 0         | 0     | 0     | 0      | 0         | 240    | 0           |
| 7:45        | 5          | 122   | 1     | 0      | 128       | 1         | 0    | 5     | 0      | 6         | 1          | 87    | 7     | 0      | 95        | 2         | 1     | 0     | 0      | 3         | 232    | 0           |
| Total       | 18         | 442   | 1     | 0      | 461       | 13        | 2    | 20    | 0      | 35        | 5          | 340   | 22    | 0      | 367       | 4         | 3     | 1     | 0      | 8         | 871    | 0           |
| 8:00        | 8          | 135   | 0     | 0      | 143       | 8         | 0    | 3     | 0      | 11        | 1          | 90    | 9     | 0      | 100       | 1         | 0     | 0     | 0      | 1         | 255    | 0           |
| 8:15        | 1          | 133   | 0     | 0      | 134       | 6         | 1    | 10    | 0      | 17        | 0          | 90    | 5     | 0      | 95        | 0         | 0     | 1     | 0      | 1         | 247    | 0           |
| 8:30        | 6          | 130   | 0     | 0      | 136       | 12        | 0    | 10    | 0      | 22        | 1          | 98    | 10    | 0      | 109       | 2         | 0     | 0     | 0      | 2         | 269    | 0           |
| 8:45        | 5          | 174   | 0     | 0      | 179       | 10        | 0    | 4     | 0      | 14        | 2          | 102   | 5     | 0      | 109       | 1         | 0     | 1     | 0      | 2         | 304    | 0           |
| Total       | 20         | 572   | 0     | 0      | 592       | 36        | 1    | 27    | 0      | 64        | 4          | 380   | 29    | 0      | 413       | 4         | 0     | 2     | 0      | 6         | 1075   | 0           |
| 14:30       | 9          | 137   | 0     | 0      | 146       | 6         | 0    | 13    | 0      | 19        | 0          | 171   | 10    | 0      | 181       | 0         | 0     | 0     | 0      | 0         | 346    | 0           |
| 14:45       | 11         | 138   | 0     | 0      | 149       | 13        | 0    | 12    | 0      | 25        | 0          | 172   | 11    | 0      | 183       | 0         | 0     | 1     | 0      | 1         | 358    | 0           |
| 15:00       | 9          | 116   | 0     | 0      | 125       | 11        | 0    | 17    | 0      | 28        | 0          | 164   | 14    | 0      | 178       | 0         | 1     | 0     | 0      | 1         | 332    | 0           |
| 15:15       | 10         | 125   | 1     | 0      | 136       | 5         | 2    | 18    | 0      | 25        | 1          | 183   | 18    | 0      | 202       | 0         | 1     | 0     | 0      | 1         | 364    | 0           |
| Total       | 39         | 516   | 1     | 0      | 556       | 35        | 2    | 60    | 0      | 97        | 1          | 690   | 53    | 0      | 744       | 0         | 2     | 1     | 0      | 3         | 1400   | 0           |
| 15:30       | 14         | 95    | 0     | 0      | 109       | 4         | 0    | 10    | 0      | 14        | 1          | 194   | 17    | 0      | 212       | 0         | 3     | 0     | 0      | 3         | 338    | 0           |
| 15:45       | 7          | 113   | 1     | 0      | 121       | 5         | 0    | 19    | 0      | 24        | 0          | 183   | 22    | 0      | 205       | 0         | 0     | 0     | 0      | 0         | 350    | 0           |
| 16:00       | 13         | 106   | 0     | 0      | 119       | 8         | 1    | 14    | 0      | 23        | 0          | 200   | 16    | 0      | 216       | 0         | 0     | 1     | 0      | 1         | 359    | 0           |
| 16:15       | 8          | 136   | 0     | 0      | 144       | 9         | 0    | 24    | 0      | 33        | 0          | 217   | 11    | 0      | 228       | 0         | 0     | 1     | 0      | 1         | 406    | 0           |
| Total       | 42         | 450   | 1     | 0      | 493       | 26        | 1    | 67    | 0      | 94        | 1          | 794   | 66    | 0      | 861       | 0         | 3     | 2     | 0      | 5         | 1453   | 0           |
| 16:30       | 9          | 128   | 0     | 0      | 137       | 6         | 0    | 12    | 0      | 18        | 0          | 157   | 11    | 0      | 168       | 0         | 0     | 0     | 0      | 0         | 323    | 0           |
| 16:45       | 6          | 143   | 0     | 0      | 149       | 8         | 0    | 2     | 0      | 10        | 0          | 174   | 10    | 0      | 184       | 0         | 1     | 0     | 0      | 1         | 344    | 0           |
| 17:00       | 5          | 141   | 0     | 0      | 146       | 5         | 0    | 4     | 0      | 9         | 0          | 216   | 19    | 0      | 235       | 0         | 0     | 0     | 0      | 0         | 390    | 0           |
| 17:15       | 10         | 106   | 0     | 0      | 116       | 9         | 0    | 5     | 0      | 14        | 2          | 183   | 9     | 0      | 194       | 0         | 0     | 0     | 0      | 0         | 324    | 0           |
| Total       | 30         | 518   | 0     | 0      | 548       | 28        | 0    | 23    | 0      | 51        | 2          | 730   | 49    | 0      | 781       | 0         | 1     | 0     | 0      | 1         | 1381   | 0           |
| 17:30       | 2          | 106   | 0     | 0      | 108       | 7         | 0    | 10    | 0      | 17        | 0          | 177   | 18    | 0      | 195       | 0         | 0     | 0     | 0      | 0         | 320    | 0           |
| 17:45       | 4          | 107   | 0     | 1      | 112       | 6         | 0    | 4     | 1      | 11        | 0          | 171   | 4     | 0      | 175       | 0         | 0     | 0     | 0      | 0         | 298    | 2           |
| 18:00       | 0          | 0     | 0     | 0      | 0         | 0         | 0    | 0     | 0      | 0         | 0          | 0     | 0     | 0      | 0         | 0         | 0     | 0     | 0      | 0         | 0      | 0           |
| 18:15       | 0          | 0     | 0     | 0      | 0         | 0         | 0    | 0     | 0      | 0         | 0          | 0     | 0     | 0      | 0         | 0         | 0     | 0     | 0      | 0         | 0      | 0           |
| Total       | 6          | 213   | 0     | 1      | 220       | 13        | 0    | 14    | 1      | 28        | 0          | 348   | 22    | 0      | 370       | 0         | 0     | 0     | 0      | 0         | 618    | 2           |
| Grand Total | 155        | 2711  | 3     | 1      | 2870      | 151       | 6    | 211   | 1      | 369       | 13         | 3282  | 241   | 0      | 3536      | 8         | 9     | 6     | 0      | 23        | 6798   | 2           |
| Apprch %    | 5.4%       | 94.5% | 0.1%  | 0.0%   |           | 40.9%     | 1.6% | 57.2% | 0.3%   |           | 0.4%       | 92.8% | 6.8%  | 0.0%   |           | 34.8%     | 39.1% | 26.1% | 0.0%   |           |        |             |
| Total %     | 2.3%       | 39.9% | 0.0%  | 0.0%   | 42.2%     | 2.2%      | 0.1% | 3.1%  | 0.0%   | 5.4%      | 0.2%       | 48.3% | 3.5%  | 0.0%   | 52.0%     | 0.1%      | 0.1%  | 0.1%  | 0.0%   | 0.3%      | 100.0% |             |

| AM PEAK HOUR                                      | Southbound |       |       |        |           | Westbound |      |       |        |           | Northbound |       |       |        |           | Eastbound |      |       |        |           |       |  |
|---------------------------------------------------|------------|-------|-------|--------|-----------|-----------|------|-------|--------|-----------|------------|-------|-------|--------|-----------|-----------|------|-------|--------|-----------|-------|--|
| START TIME                                        | LEFT       | THRU  | RIGHT | UTURNS | APP.TOTAL | LEFT      | THRU | RIGHT | UTURNS | APP.TOTAL | LEFT       | THRU  | RIGHT | UTURNS | APP.TOTAL | LEFT      | THRU | RIGHT | UTURNS | APP.TOTAL | Total |  |
| Peak Hour Analysis From 08:00 to 09:00            |            |       |       |        |           |           |      |       |        |           |            |       |       |        |           |           |      |       |        |           |       |  |
| Peak Hour For Entire Intersection Begins at 08:00 |            |       |       |        |           |           |      |       |        |           |            |       |       |        |           |           |      |       |        |           |       |  |
| 8:00                                              | 8          | 135   | 0     | 0      | 143       | 8         | 0    | 3     | 0      | 11        | 1          | 90    | 9     | 0      | 100       | 1         | 0    | 0     | 0      | 1         | 255   |  |
| 8:15                                              | 1          | 133   | 0     | 0      | 134       | 6         | 1    | 10    | 0      | 17        | 0          | 90    | 5     | 0      | 95        | 0         | 0    | 1     | 0      | 1         | 247   |  |
| 8:30                                              | 6          | 130   | 0     | 0      | 136       | 12        | 0    | 10    | 0      | 22        | 1          | 98    | 10    | 0      | 109       | 2         | 0    | 0     | 0      | 2         | 269   |  |
| 8:45                                              | 5          | 174   | 0     | 0      | 179       | 10        | 0    | 4     | 0      | 14        | 2          | 102   | 5     | 0      | 109       | 1         | 0    | 1     | 0      | 2         | 304   |  |
| Total Volume                                      | 20         | 572   | 0     | 0      | 592       | 36        | 1    | 27    | 0      | 64        | 4          | 380   | 29    | 0      | 413       | 4         | 0    | 2     | 0      | 6         | 1075  |  |
| % App Total                                       | 3.4%       | 96.6% | 0.0%  | 0.0%   |           | 56.3%     | 1.6% | 42.2% | 0.0%   |           | 1.0%       | 92.0% | 7.0%  | 0.0%   |           | 66.7%     | 0.0% | 33.3% | 0.0%   |           |       |  |
| PHF                                               | .625       | .822  | .000  | .000   | .827      | .750      | .250 | .675  | .000   | .727      | .500       | .931  | .725  | .000   | .947      | .500      | .000 | .500  | .000   | .750      | .884  |  |



File Name: 16-7596-001 Pratt Ave & SR 29  
Start Date: 9/1/16  
Start Time:  
Site Code:  
Comment 1: City of St Helena  
Comment 2: All Vehicles & Turns On Unshifted  
Comment 3: Bikes & Peds On Bank 1  
Comment 4: Heavy Trucks On Bank 2

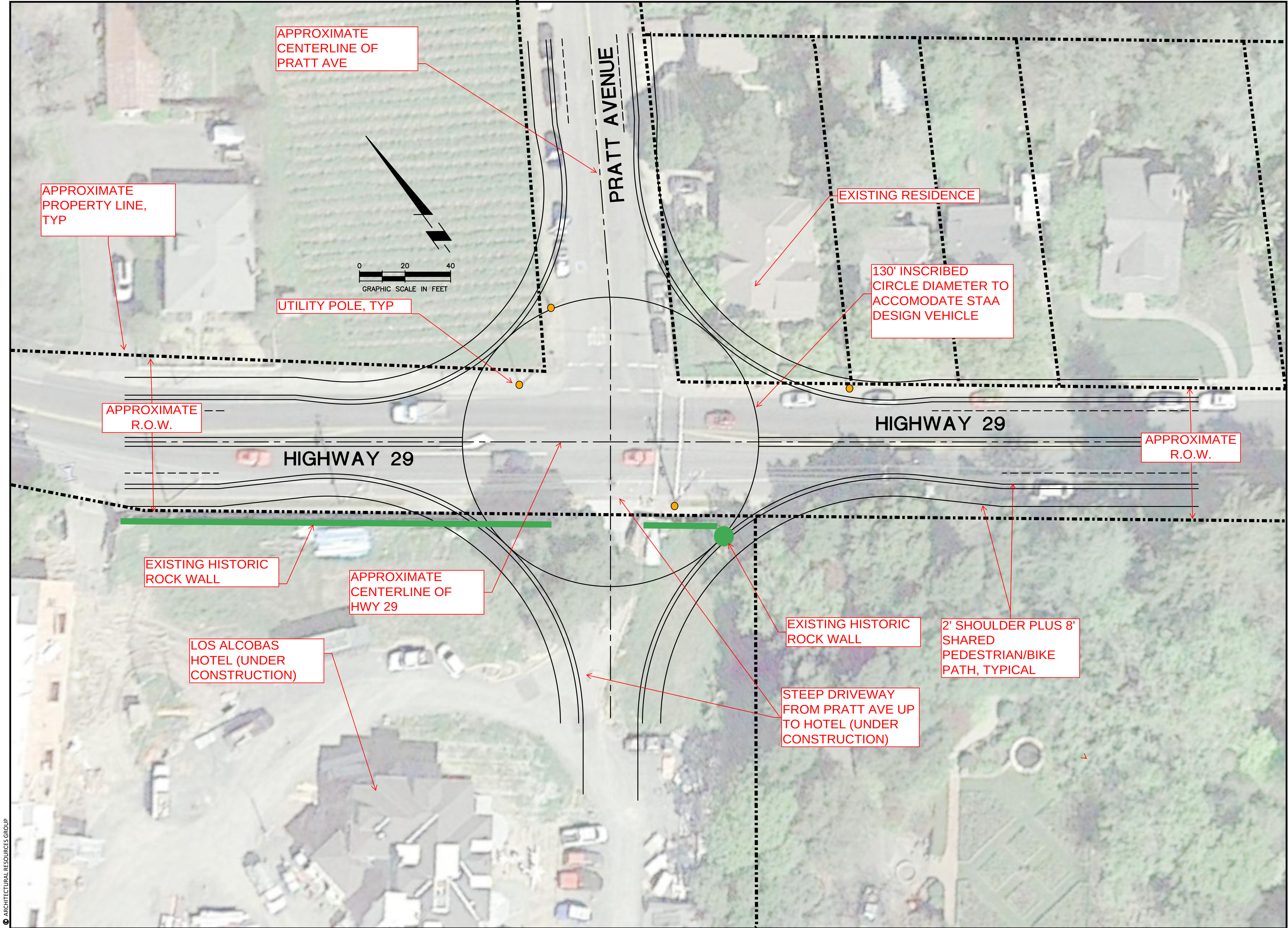
| Document 4: Heavy Trucks on Park 2 |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       |        |
|------------------------------------|------------|------|-------|--------|-----------|------|-------|--------|------------|------|-------|--------|-----------|------|-------|--------|
| Start Time                         | Southbound |      |       |        | Westbound |      |       |        | Northbound |      |       |        | Eastbound |      |       |        |
|                                    | LEFT       | THRU | RIGHT | UTURNS | LEFT      | THRU | RIGHT | UTURNS | LEFT       | THRU | RIGHT | UTURNS | LEFT      | THRU | RIGHT | UTURNS |
| 12:00 AM                           |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 12:15 AM                           |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 12:30 AM                           |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 12:45 AM                           |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 1:00 AM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 1:15 AM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 1:30 AM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 1:45 AM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 2:00 AM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 2:15 AM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 2:30 AM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 2:45 AM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 3:00 AM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 3:15 AM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 3:30 AM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 3:45 AM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 4:00 AM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 4:15 AM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 4:30 AM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 4:45 AM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 5:00 AM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 5:15 AM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 5:30 AM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 5:45 AM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 6:00 AM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 6:15 AM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 6:30 AM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 6:45 AM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 7:00 AM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 7:15 AM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 7:30 AM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 7:45 AM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 274    |
| 8:00 AM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 539    |
| 8:15 AM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 798    |
| 8:30 AM                            | 2          | 119  | 0     | 0      | 4         | 1    | 8     | 1      | 0          | 133  | 6     | 0      | 0         | 1    | 0     | 0      |
| 8:45 AM                            | 6          | 128  | 0     | 0      | 6         | 0    | 2     | 0      | 0          | 112  | 11    | 0      | 0         | 0    | 0     | 1078   |
| 9:00 AM                            | 3          | 115  | 0     | 0      | 8         | 0    | 6     | 0      | 1          | 119  | 6     | 0      | 0         | 1    | 0     | 1065   |
| 9:15 AM                            | 9          | 111  | 0     | 0      | 7         | 0    | 10    | 0      | 0          | 133  | 10    | 0      | 0         | 0    | 0     | 1079   |
| 9:30 AM                            | 8          | 123  | 0     | 0      | 5         | 0    | 12    | 0      | 2          | 135  | 6     | 0      | 0         | 0    | 1     | 1069   |
| 9:45 AM                            | 4          | 97   | 0     | 0      | 5         | 0    | 7     | 0      | 1          | 115  | 5     | 0      | 0         | 0    | 0     | 1071   |
| 10:00 AM                           | 3          | 120  | 0     | 0      | 8         | 0    | 10    | 0      | 0          | 122  | 9     | 0      | 0         | 1    | 0     | 1088   |
| 10:15 AM                           | 6          | 107  | 0     | 0      | 9         | 1    | 4     | 0      | 0          | 136  | 6     | 0      | 0         | 1    | 0     | 1056   |
| 10:30 AM                           | 2          | 142  | 0     | 0      | 7         | 0    | 4     | 0      | 1          | 124  | 12    | 0      | 0         | 2    | 0     | 976    |
| 10:45 AM                           | 2          | 115  | 0     | 0      | 4         | 0    | 4     | 0      | 1          | 116  | 9     | 0      | 0         | 0    | 0     | 910    |
| 11:00 AM                           | 1          | 102  | 1     | 0      | 6         | 0    | 4     | 0      | 2          | 119  | 6     | 0      | 0         | 0    | 0     | 955    |
| 11:15 AM                           | 0          | 83   | 0     | 0      | 10        | 0    | 1     | 0      | 1          | 92   | 1     | 0      | 0         | 0    | 2     | 997    |
| 11:30 AM                           | 10         | 91   | 0     | 0      | 7         | 0    | 4     | 0      | 1          | 109  | 6     | 0      | 0         | 0    | 0     | 1089   |
| 11:45 AM                           | 5          | 127  | 0     | 0      | 6         | 7    | 1     | 6      | 0          | 130  | 16    | 0      | 0         | 1    | 2     | 1116   |
| 12:00 PM                           | 8          | 122  | 0     | 0      | 12        | 0    | 10    | 0      | 3          | 117  | 15    | 1      | 0         | 0    | 2     | 1107   |
| 12:15 PM                           | 1          | 122  | 0     | 0      | 3         | 0    | 10    | 0      | 2          | 123  | 18    | 0      | 0         | 1    | 0     | 1112   |
| 12:30 PM                           | 7          | 102  | 0     | 0      | 10        | 0    | 14    | 0      | 1          | 111  | 10    | 0      | 0         | 0    | 0     | 1114   |
| 12:45 PM                           | 5          | 118  | 0     | 0      | 7         | 0    | 8     | 0      | 2          | 135  | 11    | 0      | 0         | 0    | 1     | 1175   |
| 1:00 PM                            | 3          | 121  | 0     | 0      | 11        | 0    | 4     | 0      | 0          | 139  | 8     | 0      | 0         | 0    | 1     | 1203   |
| 1:15 PM                            | 6          | 119  | 0     | 0      | 8         | 0    | 5     | 0      | 0          | 135  | 10    | 0      | 0         | 0    | 0     | 1193   |
| 1:30 PM                            | 12         | 140  | 1     | 0      | 10        | 0    | 7     | 0      | 0          | 143  | 7     | 0      | 0         | 0    | 0     | 1208   |
| 1:45 PM                            | 11         | 144  | 0     | 0      | 4         | 1    | 7     | 0      | 0          | 134  | 9     | 0      | 0         | 1    | 0     | 1201   |
| 2:00 PM                            | 6          | 100  | 0     | 0      | 8         | 0    | 8     | 0      | 1          | 142  | 7     | 0      | 0         | 2    | 0     | 1218   |
| 2:15 PM                            | 10         | 125  | 0     | 0      | 8         | 0    | 7     | 0      | 2          | 142  | 4     | 0      | 1         | 0    | 0     | 940    |
| 2:30 PM                            | 8          | 129  | 0     | 0      | 8         | 0    | 6     | 0      | 0          | 152  | 10    | 0      | 0         | 0    | 0     | 641    |
| 2:45 PM                            | 7          | 137  | 0     | 0      | 8         | 0    | 14    | 0      | 0          | 148  | 15    | 0      | 0         | 0    | 0     | 328    |
| 3:00 PM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 3:15 PM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 3:30 PM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 3:45 PM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 4:00 PM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 4:15 PM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 4:30 PM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 4:45 PM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 5:00 PM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 5:15 PM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 286    |
| 5:30 PM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 529    |
| 5:45 PM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 760    |
| 6:00 PM                            | 3          | 123  | 0     | 0      | 6         | 0    | 4     | 0      | 0          | 145  | 4     | 0      | 0         | 1    | 0     | 0      |
| 6:15 PM                            | 4          | 87   | 0     | 0      | 2         | 0    | 2     | 0      | 5          | 139  | 6     | 0      | 0         | 0    | 0     | 828    |
| 6:30 PM                            | 4          | 89   | 0     | 0      | 2         | 0    | 3     | 0      | 0          | 127  | 6     | 0      | 0         | 0    | 0     | 642    |
| 6:45 PM                            | 3          | 64   | 0     | 0      | 4         | 0    | 1     | 0      | 0          | 90   | 6     | 0      | 0         | 0    | 0     | 399    |
| 7:00 PM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 168    |
| 7:15 PM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 7:30 PM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 7:45 PM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 8:00 PM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 8:15 PM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 8:30 PM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 8:45 PM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 9:00 PM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 9:15 PM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 9:30 PM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 9:45 PM                            |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 10:00 PM                           |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 10:15 PM                           |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 10:30 PM                           |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 10:45 PM                           |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 11:00 PM                           |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 11:15 PM                           |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 11:30 PM                           |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |
| 11:45 PM                           |            |      |       |        |           |      |       |        |            |      |       |        |           |      |       | 0      |

## **ACCIDENT DATA**

St. Helena Police Department  
Collision Data  
Main St/Pratt Ave

| Case #  | Date       | Time | Location              | # of V's involved | Damage                      | Minor Injuries | Major Injuries | Fatal Injuries | DUI Involved | Type of Collision | PCF      | Details                                                                            |
|---------|------------|------|-----------------------|-------------------|-----------------------------|----------------|----------------|----------------|--------------|-------------------|----------|------------------------------------------------------------------------------------|
| 12-0771 | 10/14/2012 |      | 1024 MAIN ST/PRATT AV | 2                 | 2 - Major                   | 0              | 0              | 0              | F            | Broadside         | 22107    | U-turn                                                                             |
| 13-0394 | 06/06/2013 |      | 1640 MAIN ST/PRATT AV | 2                 | 1 - Moderate, 1 - Mod/Major | 0              | 0              | 0              | F            | Broadside         | 22106    | Attempting u-turn after realizing they passed Beringer and pulled over             |
| 13-0482 | 07/10/2013 |      | 615 MAIN ST/PRATT AV  | 1                 | 1 - Major                   | 0              | 0              | 0              | F            | Hit object        | 22107    | Distracted by child in V, drifted to right into a tree at beginning of tree tunnel |
| 14-0106 | 02/20/2014 |      | 904 MAIN ST/PRATT AV  | 2                 | 2 - Moderate                | 0              | 0              | 0              | F            | Side Swipe        | 22107    | V N/B Main turned onto E/B Pratt, sideswipped V waiting on Pratt                   |
| 14-0512 | 08/07/2014 |      | 758 MAIN ST/PRATT AV  | 2                 | 1 - Moderate, 1 Major       | 0              | 0              | 0              | F            | Broadside         | 21802(a) | V W/B Pratt turning N/B Main, view blocked by hedge, pulled out when unsafe        |
| 15-0497 | 08/11/2015 |      | 1236 MAIN ST/PRATT AV | 2                 | 2 - Minor                   | 0              | 0              | 0              | F            | Side Swipe        | 21750(a) | Attempted to pass illegally and clipped front corner of vehicle                    |
| 11-0873 | 10/21/11   |      | 1818 MAIN ST/PRATT AV | 2                 | Unknown                     | 0              | 0              | 0              | F            | Unknown           | Unknown  | Record Purged                                                                      |
| 11-0982 | 12/2/11    |      | 1449 MAIN ST/PRATT AV | 3                 | Unknown                     | 0              | 0              | 0              | F            | Unknown           | Unknown  | Record Purged                                                                      |
| 11-0983 | 12/2/11    |      | 1524 MAIN ST/PRATT AV | 2                 | Unknown                     | 0              | 0              | 0              | F            | Unknown           | Unknown  | Record Purged                                                                      |





24"x36" OR 22"x34" SHEET SIZE. IF SHEET IS SMALLER, THEN DRAWING HAS BEEN REDUCED.



Architectural  
Resources Group

Pier 9, The Embarcadero, Suite 107  
San Francisco, California 94111  
415 421 1680

argrf.com

SUMMIT

Summit Engineering, Inc.  
463 Aviation Blvd., Suite 200 • Santa Rosa, CA 95403  
707-527-0775 • www.summit-sr.com

| NO.       | DESCRIPTION | DATE |
|-----------|-------------|------|
| REVISIONS |             |      |

## THE CULINARY INSTITUTE OF AMERICA

AT PRATT AVENUE  
830 PRATT AVENUE  
ST. HELENA, CALIFORNIA

SHEET TITLE  
**ROUNDAOUT**

PROJ NO.  
11208.03

DRAWN  
JA

CHECKED  
JLG

DRAWING NO.

**EXHIBITA**



**PARKING AND TRIP GENERATION DATA FROM  
CIA-GREYSTONE**

Table 7

**CULINARY INSTITUTE OF AMERICA  
EXISTING WEEKDAY PARKING DEMAND AT CIA CAMPUS (EDUCATION & TOURIST PEAK SEASON)  
(WITHOUT MASTER PLAN)**

|                                        | 6:00-7:00 | 7:00-8:00  | 8:00-9:00  | 9:00-10:00 | 10:00-11:00 | 11:00-Noon | Noon-1:00  | 1:00-2:00  | 2:00-3:00  | 3:00-4:00  | 4:00-5:00  | 5:00-6:00  | 6:00-7:00  | 7:00-8:00  | 8:00-9:00  | 9:00-10:00 | 10:00-11:00 | 11:00-Mid night |
|----------------------------------------|-----------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|-----------------|
| Admin Staff                            |           | 5          | 10         | 10         | 10          | 10         | 10         | 10         | 10         | 10         | 10         | 5          |            |            |            |            |             |                 |
| Education Staff                        | 15        | 15         | 15         | 15         | 15          | 15         | 15         | 15         | 15         | 15         | 15         | 15         | 15         | 15         | 15         |            |             |                 |
| SIG Program & Purchasing staff         | 2         | 2          | 20         | 20         | 20          | 20         | 20         | 20         | 20         | 20         | 20         |            |            |            |            |            |             |                 |
| Pub Ops/SE                             |           |            |            | 8          | 8           | 8          | 8          | 8          | 8          | 8          | 8          | 8          | 8          |            |            |            |             |                 |
| Campus Store & Café Staff              |           |            |            | 7          | 7           | 7          | 7          | 7          | 7          | 7          | 7          | 7          | 7          |            |            |            |             |                 |
| Restaurant Staff<br>Shift 1<br>Shift 2 |           |            |            | 10         | 10          | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10          | 10              |
| Teachers                               | 28        | 28         | 28         | 28         | 28          | 28         | 28         | 28         | 28         | 28         | 28         | 28         | 28         | 28         | 28         | 1          |             |                 |
| AOS Students                           |           | 53(1)      | 53         | 53         | 53          | 53         | 53         | 53         | 41         | 41         | 41         | 41         | 41         | 41         | 41         |            |             |                 |
| Continuing Ed & Food Enthusiast        |           | 28(2)      | 28         | 28         | 28          | 28         | 28         | 28         | 28         | 28         | 28         | 28         | 28         | 28         | 28         |            |             |                 |
| Restaurant Patrons (3)                 |           |            |            |            |             | 35         | 35         | 35         | 35         | 35         | 35         | 35         | 35         | 35         | 35         | 10         | 10          |                 |
| Tourists                               |           |            |            | 10         | 10          | 15         | 15         | 15         | 15         | 15         | 15         | 5          | 5          |            |            |            |             |                 |
| De Baun Theater                        |           |            |            |            |             |            | 5          | 5          | 5          | 5          | 5          |            |            |            |            |            |             |                 |
| Maintenance, Repair and Janitorial     | 15        | 15         | 15         | 15         | 15          | 15         | 15         | 15         | 15         | 15         | 15         | 15         | 15         | 15         | 10         | 10         |             |                 |
| Trades People/<br>Sales People         |           |            | 1          | 1          | 1           |            |            | 1          | 1          | 1          | 1          |            |            |            |            |            |             |                 |
| <b>TOTAL</b>                           | <b>60</b> | <b>146</b> | <b>170</b> | <b>205</b> | <b>205</b>  | <b>244</b> | <b>249</b> | <b>250</b> | <b>238</b> | <b>248</b> | <b>248</b> | <b>207</b> | <b>202</b> | <b>172</b> | <b>167</b> | <b>31</b>  | <b>20</b>   | <b>10</b>       |

**BOLD** type indicates maximum parking demand.

(1) 45 students now staying in dorms on CIA campus, 70% of these students have cars. Also project that 85% of students living off-site, and not at Vineyard Lodge housing, drive to/from campus on a 70/30 split AM/PM.

(2) 42 @ 1.5 per car.

(3) 70 patrons @ 2.0 per car

Source: Crane Transportation Group based upon input from Culinary Institute of America

**Table 8**

**CULINARY INSTITUTE OF AMERICA  
EXISTING SATURDAY PARKING DEMAND AT CIA CAMPUS (EDUCATION & TOURIST PEAK SEASON)  
(WITHOUT MASTER PLAN)**

|                                    | 6:00-7:00 | 7:00-8:00 | 8:00-9:00 | 9:00-10:00 | 10:00-11:00 | 11:00-Noon | Noon-1:00  | 1:00-2:00  | 2:00-3:00  | 3:00-4:00  | 4:00-5:00  | 5:00-6:00  | 6:00-7:00  | 7:00-8:00  | 8:00-9:00  | 9:00-10:00 | 10:00-11:00 | 11:00-Mid night |
|------------------------------------|-----------|-----------|-----------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|-----------------|
| Admin Staff                        |           |           |           |            |             |            |            |            |            |            |            |            |            |            |            |            |             |                 |
| Education Staff                    |           |           |           |            |             |            |            |            |            |            |            |            |            |            |            |            |             |                 |
| Purchasing staff                   |           |           |           |            |             |            |            |            |            |            |            |            |            |            |            |            |             |                 |
| Pub Ops/SE                         |           |           |           | 6          | 6           | 6          | 6          | 6          | 6          | 6          | 6          | 6          | 6          |            |            |            |             |                 |
| Campus Store & Café Staff          |           |           |           | 8          | 8           | 8          | 8          | 8          | 8          | 8          | 8          | 8          | 8          |            |            |            |             |                 |
| Restaurant Staff Shift 1           |           |           |           | 10         | 10          | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         |            |            |            |             |                 |
| Teachers                           | 3         | 3         | 3         | 3          | 3           | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 1          |             |                 |
| Degree & Certificate Students      |           | 14 (1)    | 14        | 14         | 14          | 14         | 14         | 14         | 6          | 6          | 6          | 6          | 6          | 6          | 6          |            |             |                 |
| Continuing Ed & Food Enthusiast    |           | 40 (2)    | 40        | 40         | 40          | 40         | 40         | 40         | 40         | 40         | 40         | 40         | 40         | 40         | 40         |            |             |                 |
| Restaurant Patrons (3)             |           |           |           |            |             | 40         | 40         | 40         | 40         | 40         | 40         | 40         | 40         | 40         | 40         | 5          | 5           |                 |
| Tourists                           |           |           |           | 10         | 10          | 15         | 15         | 15         | 15         | 15         | 15         | 5          | 5          |            |            |            |             |                 |
| De Baun Theater                    |           |           |           |            |             |            | 5          | 5          | 5          | 5          | 5          |            |            |            |            |            |             |                 |
| Maintenance, Repair and Janitorial | 15        | 15        | 15        | 15         | 15          | 15         | 15         | 15         | 15         | 15         | 15         | 15         | 15         | 15         | 10         | 10         |             |                 |
| Trades People/<br>Sales People     |           |           | 1         | 1          | 1           |            | 1          | 1          | 1          | 1          | 1          |            |            |            |            |            |             |                 |
| <b>TOTAL</b>                       | <b>18</b> | <b>72</b> | <b>73</b> | <b>107</b> | <b>107</b>  | <b>151</b> | <b>157</b> | <b>157</b> | <b>149</b> | <b>149</b> | <b>149</b> | <b>133</b> | <b>133</b> | <b>104</b> | <b>104</b> | <b>16</b>  | <b>5</b>    |                 |

**BOLD** type indicates maximum parking demand.

(1) 24 students - 85% of students living off-site, and not at Vineyard Lodge housing, drive to/from campus on a 70/30 split AM/PM.

(2) 60 @ 1.5 per car.

(3) 80 patrons @ 2.0 per car

Source: Crane Transportation Group based upon input from Culinary Institute of America



Table 9

**CULINARY INSTITUTE OF AMERICA  
EXISTING WEEKDAY PARKING DEMAND AT CIA CAMPUS (EDUCATION & TOURIST PEAK SEASON)  
(WITH MASTER PLAN)**

|                                        | 6:00-7:00 | 7:00-8:00  | 8:00-9:00  | 9:00-10:00 | 10:00-11:00 | 11:00-Noon | Noon-1:00  | 1:00-2:00  | 2:00-3:00  | 3:00-4:00  | 4:00-5:00  | 5:00-6:00  | 6:00-7:00  | 7:00-8:00  | 8:00-9:00  | 9:00-10:00 | 10:00-11:00 | 11:00-Mid night |
|----------------------------------------|-----------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|-----------------|
| Admin Staff                            |           | 1          | 5          | 5          | 5           | 5          | 5          | 5          | 5          | 5          | 5          | 1          |            |            |            |            |             |                 |
| Education Staff                        | 15        | 15         | 15         | 15         | 15          | 15         | 15         | 15         | 15         | 15         | 15         | 15         | 15         | 15         | 15         |            |             |                 |
| Purchasing staff                       | 1         | 1          | 5          | 5          | 5           | 5          | 5          | 5          | 5          | 5          | 5          |            |            |            |            |            |             |                 |
| Pub Ops/SE                             |           |            |            | 8          | 8           | 8          | 8          | 8          | 8          | 8          | 8          | 8          | 8          |            |            |            |             |                 |
| Campus Store & Café Staff              |           |            |            | 7          | 7           | 7          | 7          | 7          | 7          | 7          | 7          | 7          | 7          |            |            |            |             |                 |
| Restaurant Staff<br>Shift 1<br>Shift 2 |           |            |            | 10         | 10          | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         |            |            |            |             |                 |
| Teachers                               | 28        | 28         | 28         | 28         | 28          | 28         | 28         | 28         | 28         | 28         | 28         | 28         | 28         | 28         | 28         | 1          |             |                 |
| AOS Students                           |           | 53(1)      | 53         | 53         | 53          | 53         | 53         | 53         | 41         | 41         | 41         | 41         | 41         | 41         | 41         |            |             |                 |
| Continuing Ed & Food Enthusiast        |           | 11(2)      | 11         | 11         | 11          | 11         | 11         | 11         | 11         | 11         | 11         | 11         | 11         | 11         | 11         |            |             |                 |
| Restaurant Patrons (3)                 |           |            |            |            |             | 18         | 18         | 18         | 18         | 18         | 18         | 18         | 18         | 18         | 18         | 5          | 5           |                 |
| Tourists                               |           |            |            | 5          | 5           | 10         | 10         | 10         | 10         | 10         | 10         | 2          | 2          |            |            |            |             |                 |
| De Baun Theater                        |           |            |            |            |             |            | 5          | 5          | 5          | 5          | 5          |            |            |            |            |            |             |                 |
| Maintenance, Repair and Janitorial     | 15        | 15         | 15         | 15         | 15          | 15         | 15         | 15         | 15         | 15         | 15         | 15         | 15         | 15         | 10         | 10         |             |                 |
| Trades People/<br>Sales People         |           |            | 1          | 1          | 1           |            |            | 1          | 1          | 1          | 1          |            |            |            |            |            |             |                 |
| <b>TOTAL</b>                           | <b>59</b> | <b>124</b> | <b>133</b> | <b>163</b> | <b>163</b>  | <b>185</b> | <b>190</b> | <b>191</b> | <b>179</b> | <b>179</b> | <b>179</b> | <b>156</b> | <b>155</b> | <b>128</b> | <b>123</b> | <b>16</b>  | <b>5</b>    |                 |

**BOLD** type indicates maximum parking demand.

(1) 45 students now staying in dorms on CIA campus, 70% of these students have cars. Also project that 85% of students living off-site, and not at Vineyard Lodge housing, drive to/from campus on a 70/30 split AM/PM.

(2) 16 @ 1.5 per car.

(3) 35 patrons @ 2.0 per car

Source: Crane Transportation Group based upon input from Culinary Institute of America

**Table 10**

**CULINARY INSTITUTE OF AMERICA  
EXISTING SATURDAY PARKING DEMAND AT CIA CAMPUS (EDUCATION & TOURIST PEAK SEASON)  
(WITH MASTER PLAN)**

|                                    | 6:00-7:00 | 7:00-8:00 | 8:00-9:00 | 9:00-10:00 | 10:00-11:00 | 11:00-Noon | Noon-1:00  | 1:00-2:00  | 2:00-3:00 | 3:00-4:00 | 4:00-5:00 | 5:00-6:00 | 6:00-7:00 | 7:00-8:00 | 8:00-9:00 | 9:00-10:00 | 10:00-11:00 | 11:00-Mid night |
|------------------------------------|-----------|-----------|-----------|------------|-------------|------------|------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|-------------|-----------------|
| Admin Staff                        |           |           |           |            |             |            |            |            |           |           |           |           |           |           |           |            |             |                 |
| Education Staff                    |           |           |           |            |             |            |            |            |           |           |           |           |           |           |           |            |             |                 |
| Purchasing staff                   |           |           |           |            |             |            |            |            |           |           |           |           |           |           |           |            |             |                 |
| Pub Ops/SE                         |           |           |           | 6          | 6           | 6          | 6          | 6          | 6         | 6         | 6         | 6         | 6         |           |           |            |             |                 |
| Campus Store & Café Staff          |           |           |           | 8          | 8           | 8          | 8          | 8          | 8         | 8         | 8         | 8         | 8         |           |           |            |             |                 |
| Restaurant Staff Shift 1           |           |           |           | 10         | 10          | 10         | 10         | 10         | 10        | 10        | 10        | 10        | 10        |           |           |            |             |                 |
| Teachers                           | 3         | 3         | 3         | 3          | 3           | 3          | 3          | 3          | 3         | 3         | 3         | 3         | 3         | 3         | 3         | 1          |             |                 |
| AOS Students                       |           | 14        | 14        | 14         | 14          | 14         | 14         | 14         | 6         | 6         | 6         | 6         | 6         | 6         | 6         |            |             |                 |
| Continuing Ed & Food Enthusiast    |           | 20        | 20        | 20         | 20          | 20         | 20         | 20         | 20        | 20        | 20        | 20        | 20        | 20        | 20        |            |             |                 |
| Restaurant Patrons (3)             |           |           |           |            |             | 20         | 20         | 20         | 20        | 20        | 20        | 20        | 20        | 20        | 20        | 5          | 5           |                 |
| Tourists                           |           |           |           | 5          | 5           | 10         | 10         | 10         | 10        | 10        | 10        | 2         | 2         |           |           |            |             |                 |
| De Baun Theater                    |           |           |           |            |             |            | 5          | 5          | 5         | 5         | 5         |           |           |           |           |            |             |                 |
| Maintenance, Repair and Janitorial | 3         | 3         | 3         | 3          | 3           | 3          | 3          | 3          | 3         | 3         | 3         | 3         | 3         | 3         | 3         | 3          |             |                 |
| Trades People/ Sales People        |           |           | 1         | 1          | 1           |            | 1          | 1          | 1         | 1         | 1         |           |           |           |           |            |             |                 |
| <b>TOTAL</b>                       | <b>6</b>  | <b>40</b> | <b>41</b> | <b>70</b>  | <b>70</b>   | <b>89</b>  | <b>100</b> | <b>100</b> | <b>92</b> | <b>92</b> | <b>92</b> | <b>78</b> | <b>78</b> | <b>52</b> | <b>52</b> | <b>9</b>   | <b>5</b>    |                 |

**BOLD** type indicates maximum parking demand.

(1) 24 students now staying in dorms on CIA campus, 70% of these students have cars. Also project that 85% of students living off-site, and not at Vineyard Lodge housing, drive to/from campus on a 70/30 split AM/PM.

(2) 30 @ 1.5 per car.

(3) 40 patrons @ 2.0 per car

Source: Crane Transportation Group based upon input from Culinary Institute of America

**Appendix Table A**  
**CULINARY INSTITUTE OF AMERICA - GREYSTONE**  
**EXISTING WEEKDAY TRIP GENERATION AT CIA CAMPUS (EDUCATION & TOURIST PEAK SEASON)**  
**(WITHOUT MASTER PLAN PROJECT) 6:00 AM to 3:00 PM; “With Master Plan Project” reductions are shown in bold text**

|                                        | 6:00-7:00<br>AM |     | 7:00-8:00<br>AM |     | 8:00 – 9 :00<br>AM    |                    | 9:00 – 10:00<br>AM |     | 10:00 – 11:00<br>AM |     | 11:00 AM-<br>12:00 NOON |     | 12:00 – 1:00<br>PM |     | 1:00 – 2:00<br>PM |     | 2:00 – 3:00<br>PM |     |
|----------------------------------------|-----------------|-----|-----------------|-----|-----------------------|--------------------|--------------------|-----|---------------------|-----|-------------------------|-----|--------------------|-----|-------------------|-----|-------------------|-----|
|                                        | IN              | OUT | IN              | OUT | IN                    | OUT                | IN                 | OUT | IN                  | OUT | IN                      | OUT | IN                 | OUT | IN                | OUT | IN                | OUT |
| Admin Staff                            |                 |     | 5               |     | 5<br><b>-5 (4)</b>    |                    |                    |     |                     |     |                         |     | 2                  | 2   |                   |     |                   |     |
| Education Staff                        | 15              |     |                 |     |                       |                    |                    |     |                     |     |                         |     |                    |     | 15                | 15  |                   |     |
| SIG Program &<br>Purchasing staff      | 2               |     |                 |     | 21<br><b>-16 (4)</b>  | 3<br><b>-3 (4)</b> |                    |     |                     |     |                         |     | 5                  | 5   |                   |     |                   |     |
| Pub Ops/SE                             |                 |     |                 |     | 8                     |                    |                    |     |                     |     |                         |     | 1                  | 1   |                   |     |                   |     |
| Campus Store &<br>Café Staff           |                 |     |                 |     | 7                     |                    |                    |     |                     |     |                         |     | 1                  | 1   |                   |     |                   |     |
| Restaurant Staff<br>Shift 1<br>Shift 2 |                 |     |                 |     | 10                    |                    |                    |     |                     |     |                         |     |                    |     |                   |     |                   |     |
| Teachers                               | 28              |     |                 |     |                       |                    |                    |     |                     |     |                         |     |                    |     | 28                | 28  |                   |     |
| AOS Students                           |                 |     | 53              |     |                       |                    |                    |     |                     |     | 3                       | 3   |                    |     |                   | 53  | 41                |     |
| Continuing Ed & Food<br>Enthusiast     |                 |     | 28              |     |                       |                    |                    |     |                     |     |                         |     |                    |     | 28                | 28  |                   |     |
| Restaurant Patrons (3)                 |                 |     |                 |     |                       |                    |                    |     |                     |     | 35                      |     | 5                  | 5   | 5                 | 5   | 5                 | 5   |
| Tourists                               |                 |     |                 |     |                       |                    | 10                 |     | 5                   | 5   | 8                       | 3   | 3                  | 3   | 2                 | 2   | 3                 | 3   |
| De Baun Theater                        |                 |     |                 |     |                       |                    |                    |     |                     |     |                         |     | 5                  |     |                   |     |                   |     |
| Maintenance, Repair and<br>Janitorial  | 15              |     |                 |     |                       |                    |                    |     |                     |     |                         |     |                    |     |                   |     | 15                | 15  |
| Trades People/<br>Sales People         |                 |     |                 |     | 1                     |                    | 1                  | 1   | 1                   | 2   |                         |     |                    |     | 1                 |     | 1                 | 1   |
| Shuttles                               | 4               | 4   | 4               | 4   | 4                     | 4                  | 4                  | 4   | 4                   | 4   | 4                       | 4   | 4                  | 4   | 4                 | 4   | 4                 | 4   |
| Deliveries                             |                 |     |                 |     | 1                     |                    | 2                  | 1   | 2                   | 1   |                         |     |                    |     | 2                 |     | 2                 | 1   |
| TOTAL                                  | 64              | 4   | 90              | 4   | 57<br><b>- 21 (4)</b> | 7<br><b>-3 (4)</b> | 17                 | 6   | 12                  | 12  | 50                      | 10  | 26                 | 21  | 85                | 135 | 71                | 29  |

(1) 45 students now staying in dorms on CIA campus; 70% of these students have cars. Also project that 85% of students living off-site, and not at Vineyard Lodge housing, drive to/from campus on a 70/30 split AM/PM.

(2) 42 @ 1.5 per car.

(3) 70 patrons @ 2.0 per car

(4) “With Project” reductions 7:45 – 8:45 AM: 21 inbound, 3 outbound

Source: Crane Transportation Group based upon input from Culinary Institute of America

**Appendix Table B**  
**CULINARY INSTITUTE OF AMERICA - GREYSTONE**  
**EXISTING WEEKDAY TRIP GENERATION AT CIA CAMPUS (EDUCATION & TOURIST PEAK SEASON)**  
**(WITHOUT MASTER PLAN PROJECT) 3:00 PM to 12:00 MIDNIGHT; “With Master Plan Project” reductions are shown in bold text**

|                                        | 3:00-4:00 PM |     | 4:00-5:00 PM         |                      | 5:00 – 6:-00 PM |     | 6:00 – 7:00 PM |     | 7:00 – 8:00 PM |     | 8:00-9:00 PM |     | 9:00 – 10:00 |     | 10:00 –11:00 |     | 11:00 – 12:00 MIDNIGHT |     |
|----------------------------------------|--------------|-----|----------------------|----------------------|-----------------|-----|----------------|-----|----------------|-----|--------------|-----|--------------|-----|--------------|-----|------------------------|-----|
|                                        | IN           | OUT | IN                   | OUT                  | IN              | OUT | IN             | OUT | IN             | OUT | IN           | OUT | IN           | OUT | IN           | OUT | IN                     | OUT |
| Admin Staff                            |              |     |                      | 10<br><b>-5 (4)</b>  |                 | 5   |                |     |                |     |              |     |              |     |              |     |                        |     |
| Education Staff                        |              |     |                      |                      |                 |     |                |     |                |     |              | 15  |              |     |              |     |                        |     |
| SIG Program & Purchasing staff         |              |     |                      | 20<br><b>-15 (4)</b> |                 |     |                |     |                |     |              |     |              |     |              |     |                        |     |
| Pub Ops/SE                             |              |     |                      |                      |                 |     |                | 8   |                |     |              |     |              |     |              |     |                        |     |
| Campus Store & Café Staff              |              |     |                      |                      |                 |     |                | 7   |                |     |              |     |              |     |              |     |                        |     |
| Restaurant Staff<br>Shift 1<br>Shift 2 | 10           |     |                      |                      |                 |     |                | 10  |                |     |              |     |              |     |              |     |                        | 10  |
| Teachers                               |              |     |                      | 2                    | 2               |     |                |     |                |     |              | 28  |              |     |              |     |                        |     |
| AOS Students                           |              |     |                      | 2                    | 2               |     |                |     |                |     |              | 41  |              |     |              |     |                        |     |
| Continuing Ed & Food Enthusiast        |              |     | 1<br><b>-1 (4)</b>   | 1                    |                 |     |                |     |                |     |              | 28  |              |     |              |     |                        |     |
| Restaurant Patrons (3)                 | 5            | 5   | 4<br><b>-1 (4)</b>   | 4                    | 4               | 4   | 15             | 15  | 15             | 15  | 10           | 10  |              | 25  |              | 10  |                        |     |
| Tourists                               | 10           | 10  | 15<br><b>-5 (4)</b>  | 15<br><b>-5 (4)</b>  |                 | 10  |                | 5   |                |     |              |     |              |     |              |     |                        |     |
| De Baun Theater                        |              |     |                      | 5                    |                 |     |                |     |                |     |              |     |              |     |              |     |                        |     |
| Maintenance, Repair and Janitorial     |              |     | 2                    | 2                    |                 |     |                |     |                | 5   |              |     |              | 10  |              |     |                        |     |
| Trades People/<br>Sales People         | 1            | 1   |                      | 2                    |                 |     |                |     |                |     |              |     |              |     |              |     |                        |     |
| Shuttles                               | 4            | 4   | 4                    | 4                    | 4               | 4   | 4              | 4   | 4              | 4   | 4            | 4   | 4            | 4   |              |     |                        |     |
| Deliveries                             |              | 1   | 3<br><b>-3 (4)</b>   | 5                    |                 | 3   |                |     |                |     |              |     |              |     |              |     |                        |     |
| TOTAL                                  | 29           | 21  | 29<br><b>-10 (4)</b> | 72<br><b>-25 (4)</b> | 12              | 21  | 19             | 49  | 19             | 24  | 14           | 111 | 4            | 39  |              | 10  |                        | 10  |

(1) 45 students now staying in dorms on CIA campus, assume 70% of these students have cars. Also project that 85% of students living off-site, and not at Vineyard Lodge housing, drive to/from campus on a 70/30 split AM/PM.

(2) 42 @ 1.5 per car.

(3) 70 patrons @ 2.0 per car

(4) “With Project” reductions 4:00 – 5:00 PM: 10 inbound, 25 outbound

Source: Crane Transportation Group based upon input from Culinary Institute of America



# PACIFIC TREE CARE

*Joseph A. Schneider Certified Arborist WE-0156A*  
*Jacob I. Schneider Certified Arborist WE-5478A*

September 2, 2016

**Tree Protection Guidelines  
And Specifications  
Developed for  
Culinary Institution of America  
830 Pratt Ave.  
St. Helena, CA 94574  
APN # 009-010-024**

## **TREE PROTECTION GUIDELINES**

1. **Fencing** – A Tree Protection Zone (TPZ) shall be established for all trees to be retained. A woven wire fence anchored with t posts is to be erected at the dripline or 2-feet behind the construction envelope should approved work encroach close to the main stem of protected trees. The 2 foot setback will provide room for the activities during construction to occur. Heavy equipment will be restricted to the construction envelope. All work within the TPZ is to be done by hand or with the use of light equipment. **The fence shall not be altered or removed by anyone other than the Consulting Arborist or his designee. It shall be the contractor's responsibility to maintain the fence.** The fence shall remain on site until all construction activities are complete. The fence can be removed for the installation of the landscape.
2. **Grading** – No grade changes shall occur within the TPZ. If as a result of grading within the construction envelope roots are encountered, the roots shall be pruned properly and neatly back to the Tree Protection Fence or the edge of the excavation. No seals or dressing are necessary. The final pruning cut should be free of all shattered material throughout the circumference of the affected root. **The Consulting Arborist, or his designee, shall be onsite when construction or grading occurs next to the TPZ.**



3. **Trenching/Tunneling** -

- All roots encountered outside the TPZ will be pruned neatly and promptly.
- Roots encountered within the TPZ that are 1 ½" in diameter and smaller shall be pruned neatly. Roots larger than 1 ½" in diameter will be tunneled under leaving all bark intact.
- Backfill trenches with native soils which are free of organic material.

4. **Pruning** - Pruning may be needed to achieve elevations over the proposed structures. Where possible, branches will be thinned to achieve elevation, and where necessary the entire branch will be removed back to the mainstem. All pruning applications shall coincide with the International Society of Arboriculture Guidelines and ANSI Pruning Standards; all prunings are to be overseen by the Consulting Arborist.

5. **Cleaning of Construction Tools or Equipment** - The cleaning of construction tools or equipment (particularly masonry tools) shall occur far from the trees to discourage toxic leachades from entering the TPZ.

6. **Soil Enhancement** - Prior to construction, all trees within the TPZ will be treated by injecting into the surrounding soils, where penetration is possible, a solution of mycorrhizal inducing spores to assist the trees' root system in absorption of micronutrients, mineral and moisture. Where compacted soils are encountered, 3" diameter holes shall be augured through the hard surfaces, or compressed air shall be used to relieve compaction. The goal is to increase water percolation and aeration processes. The holes shall be back filled with a soil medium conducive to root generation; the medium must be approved by the Consulting Arborist. A top dressing of chip mulch, 8" deep but not touching the mainstems of the trees, will be maintained at all times in the TPZ.

7. **Final Landscape Plan** - The final landscape plan shall compliment the biological necessity of the existing trees. The methodology of installations and planting palate must be approved by the Consulting Arborist prior to

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installation. All plants selected to reside within the TPZ shall be irrigated by drip style emitters. No overhead irrigation is allowed within the TPZ of protected trees.

8. **Rain Water and Landscape Irrigation** – Rain water or excessive gathered landscape irrigation must be dispersed outside the TPZ between the months of May and November.
9. **Notification** – When work is to be performed in the TPZ, the Consulting Arborist, or his designee, shall be onsite. A 48-hour *confirmed notice must be received by the Consulting Arborist* prior to commencing with activities in the TPZ. Onsite Arborist rate is \$120.00 per man, per hour.
10. **Modifications** - Any modifications to activities within the TPZ must be in writing prior to deviation from said plan. The consulting Arborist must approve any and all changes.
11. **Tree Removals** – Only trees approved during the process of application may be removed. If additional trees are to be removed the applicant must get approval from the Planning Department or Public Works. All removals shall be done without damaging preserved trees.
12. These Tree Protection Guidelines shall be reproduced in full on the cover of the development plans. Each TPZ shall be clearly illustrated on page L1.

Respectfully Submitted,

*Joseph Allan Schneider*

Joseph Allan Schneider  
ISA Certified Arborist WE-0156A  
Member American Society of Consulting Arborists  
Tree Risk Assessment Qualified

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**HYDROLOGY  
AND  
HYDRAULIC CALCULATIONS**

FOR

**CULINARY INSTITUTE OF AMERICA  
VINEYARD LODGE EXPANSION**

**830 PRATT AVENUE  
ST. HELENA, CALIFORNIA  
APN 009-010-024**

**DECEMBER 11, 2008**

PROJECT NO: 2008016

Prepared by:



**SUMMIT ENGINEERING, INC.**

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(707) 527-0775

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- Intensity – Duration Chart
- Runoff Characteristics of Watersheds

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- Proposed Hydrology Areas (H2)



VINEYARD LODGE EXPANSION

**SUMMIT ENGINEERING, INC.**  
2008016

### **GENERAL INFORMATION**

This report provides background data and calculations demonstrating no increase in runoff from pre development conditions to post development conditions at the Culinary Institute of America, Vineyard Lodge Expansion located at 830 Pratt Avenue, in Napa County, California (APN 009-010-024).

### **RAINFALL DATA/DESIGN PARAMETERS**

Review of Napa County Road & Street Standards provides the following mathematical models and constant values used in the hydrologic analysis. The charts and figures used to calculate these values are provided in Enclosure A. Additionally, Enclosure B provides further information on the surrounding soil types and locations.

Mean Seasonal Precipitation

$I = 34 \text{ In/Yr.}$

Initial Time of Concentration

$T_c = 10 \text{ min}$

CIA Vineyard Lodge Expansion  
Hydrology Calculations based on Napa County Requirements

Project Parameters:

Normal Annual Precipitation 34 in/yr  
60 Minute Rainfall (P60) 1.05 (10 year)  
Intensity (I) 1.5 (100 year)  
2.49 in/yr (10 year)  
3.19 in/yr (100 year)  
Total Area 2.52 acres  
(Q10 = runoff for 10 year storm event)  
(Q100 = runoff for 100 year storm event)

Pre- Construction Weighted C Factor

| Surface    | Area (ac) | C factor |
|------------|-----------|----------|
| Impervious | 1.14      | 0.90     |
| Pervious   | 1.38      | 0.35     |
| Weighted C |           | 0.60     |

Post Construction Weighted C Factor

| Surface           | Area (ac) | C factor | A*C  |
|-------------------|-----------|----------|------|
| Bioswale          | 0.14      | 0.20     | 0.03 |
| Landscape         | 0.48      | 0.20     | 0.10 |
| Orchard           | 0.28      | 0.45     | 0.13 |
| Impervious        | 0.78      | 0.90     | 0.70 |
| Pervious Pavement | 0.84      | 0.45     | 0.38 |
| Weighted C        |           |          | 0.53 |

Runoff Calculation (Q=CIA)

| Q event | Pre  | Post |
|---------|------|------|
| Q10     | 3.76 | 3.31 |
| Q100    | 4.81 | 4.24 |

CONCLUSION: Post-Construction runoff does not exceed pre-construction runoff

VINEYARD LODGE EXPANSION

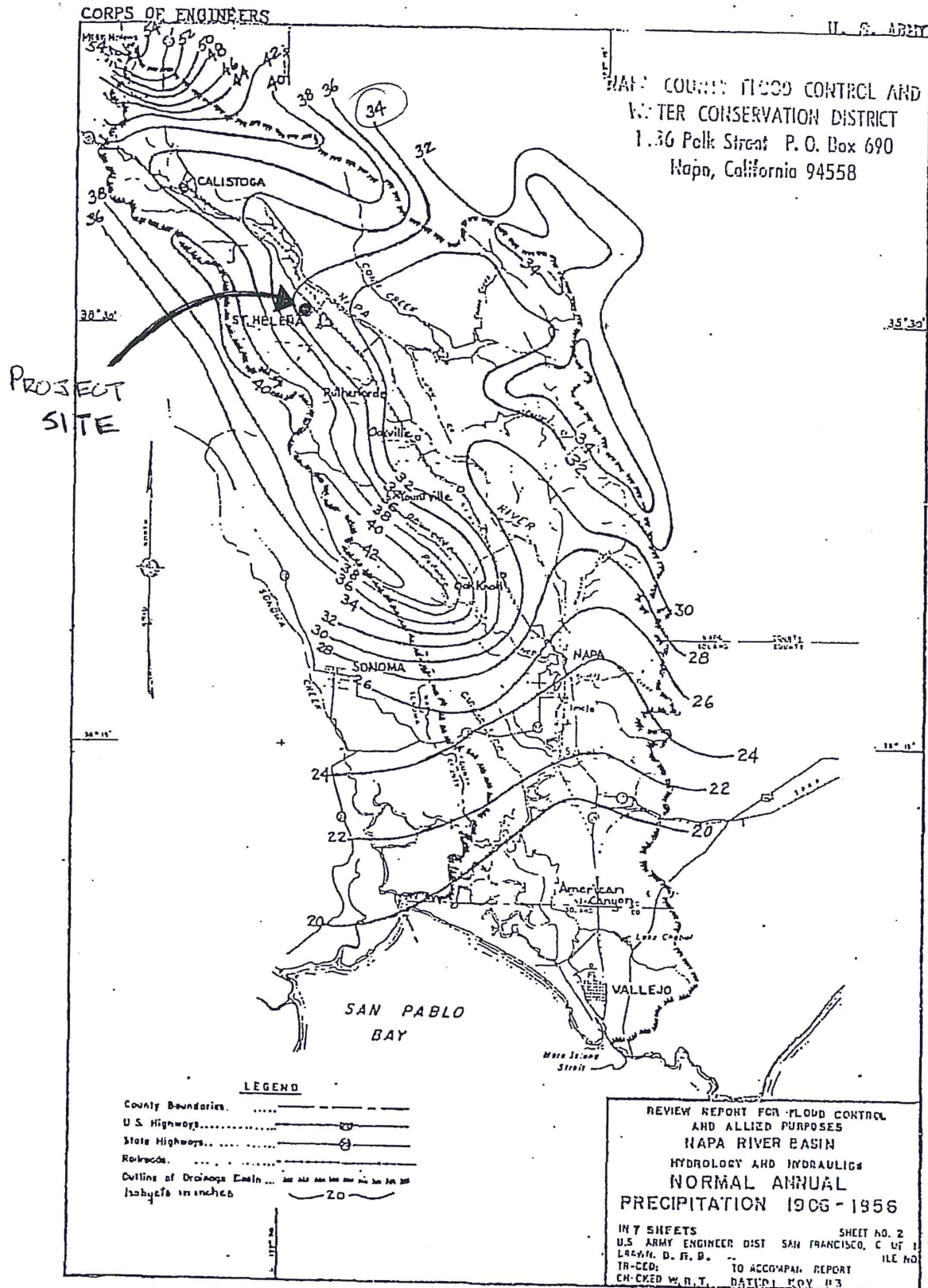
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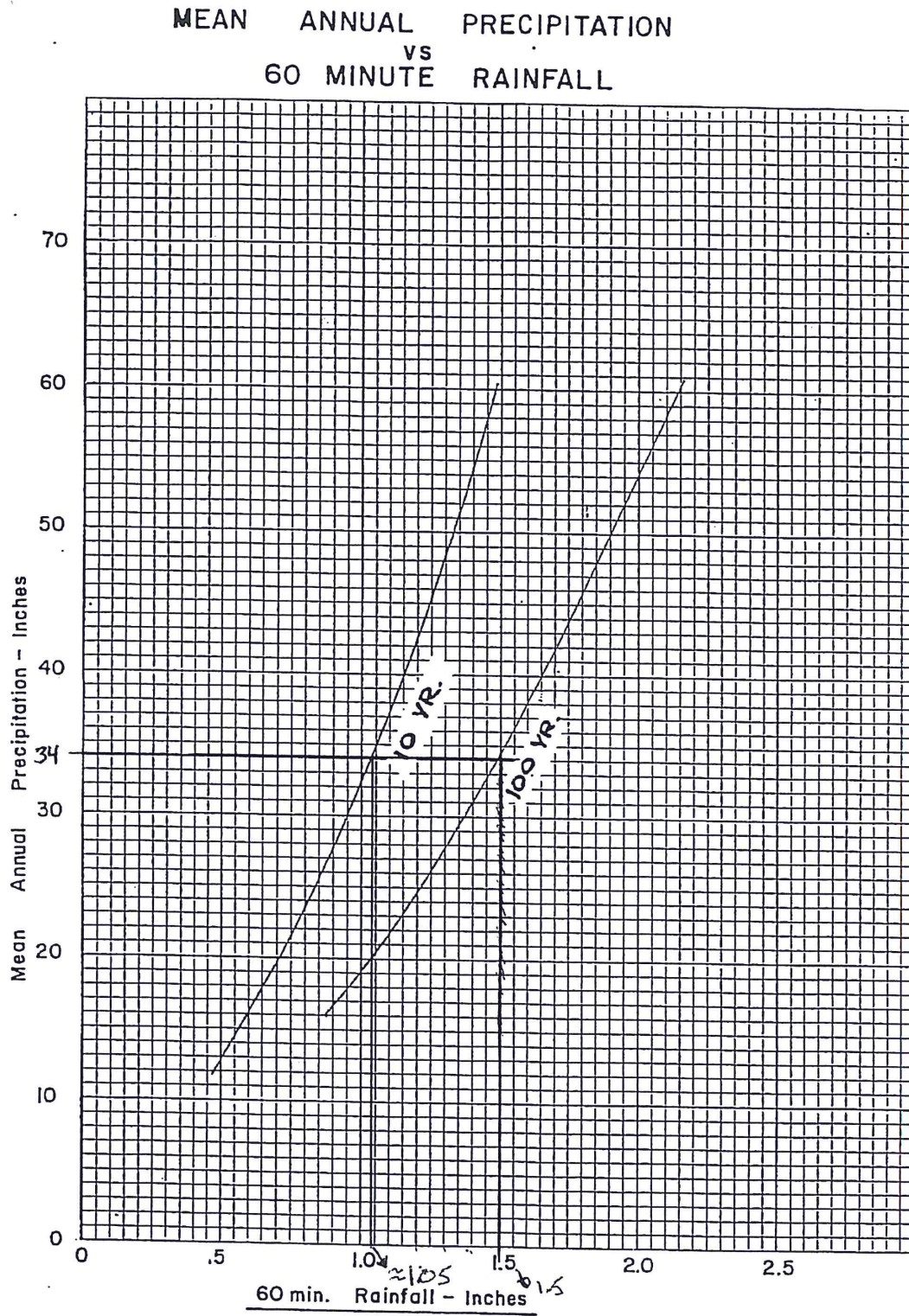
**HYDROLOGY AND HYDRAULIC CALCULATIONS  
CULINARY INSTITUTE OF AMERICA  
VINEYARD LODGE EXPANSION**

**ENCLOSURE A**

**NORMAL ANNUAL PRECIPITATION  
MEAN ANNUAL PRECIPITATION VS.  $P_{60}$   
INTENSITY-DURATION CHART**



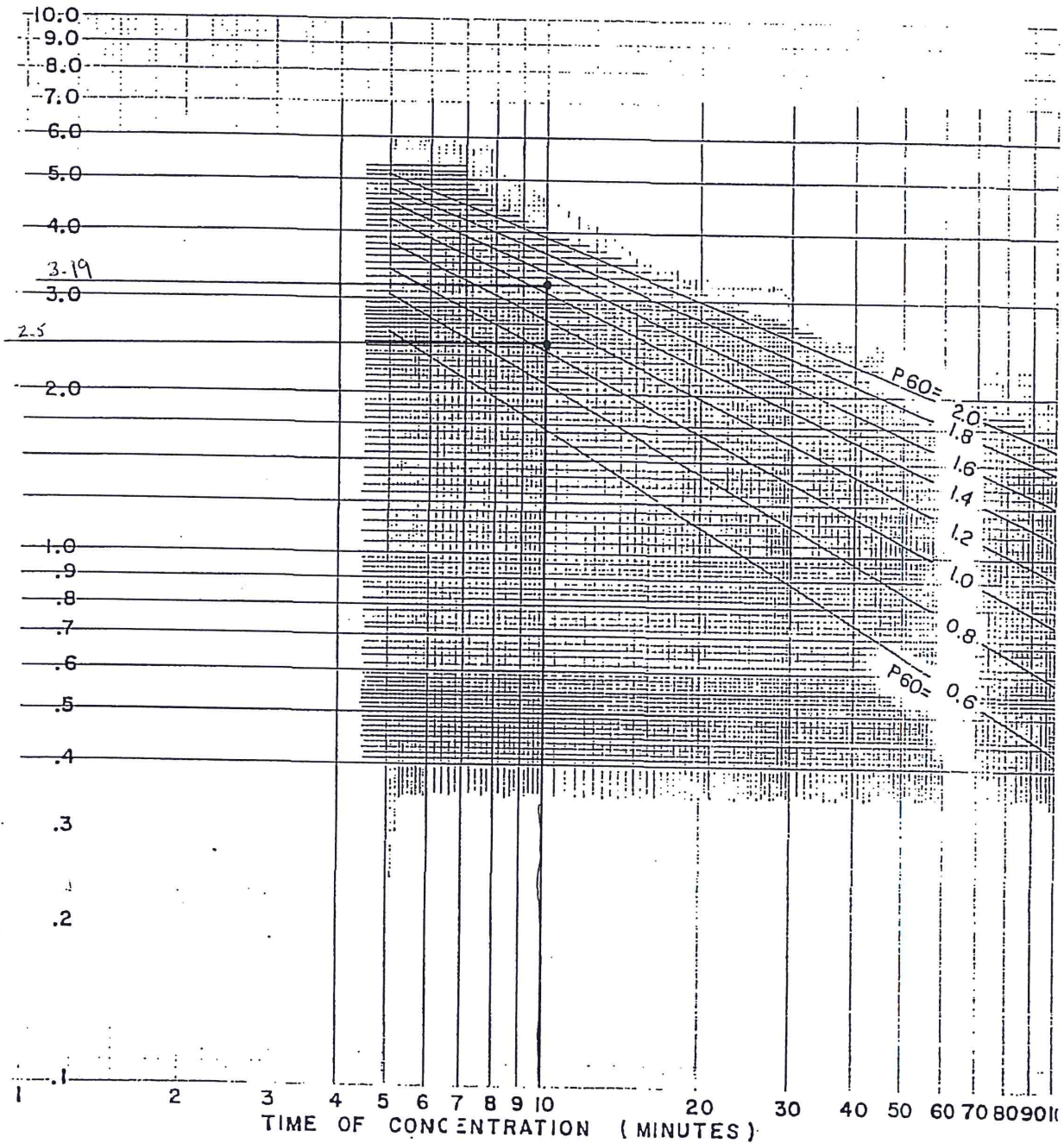






12-185

# INTENSITY - DURATION CHART



Based on figure 7-811.6 (-8-64)  
 State of California  
 Division of Highways  
 Planning Manual

Logarithmic, 2 x 2 Cycles

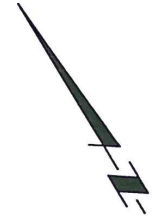
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2008016

**HYDROLOGY AND HYDRAULIC CALCULATIONS  
CULINARY INSTITUTE OF AMERICA  
VINEYARD LODGE EXPANSION**

**SITE MAPS**

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PROJECT BOUNDARY  
109,760 sq.ft.  
2.52 acres

IMPERVIOUS B  
2,810 sq.ft.  
0.06 acres

IMPERVIOUS A  
47,140 sq.ft.  
1.08 acres

AREA SUMMARY

IMPERVIOUS = 1.14 ACRES

PERVIOUS = 1.38 ACRES

DATE: 12-11-08  
JOB NO: 2008016  
SCALE: AS SHOWN  
DRAWN: NP  
CHECKED: BG  
SHEET

H1

VINEYARD LODGE EXPANSION

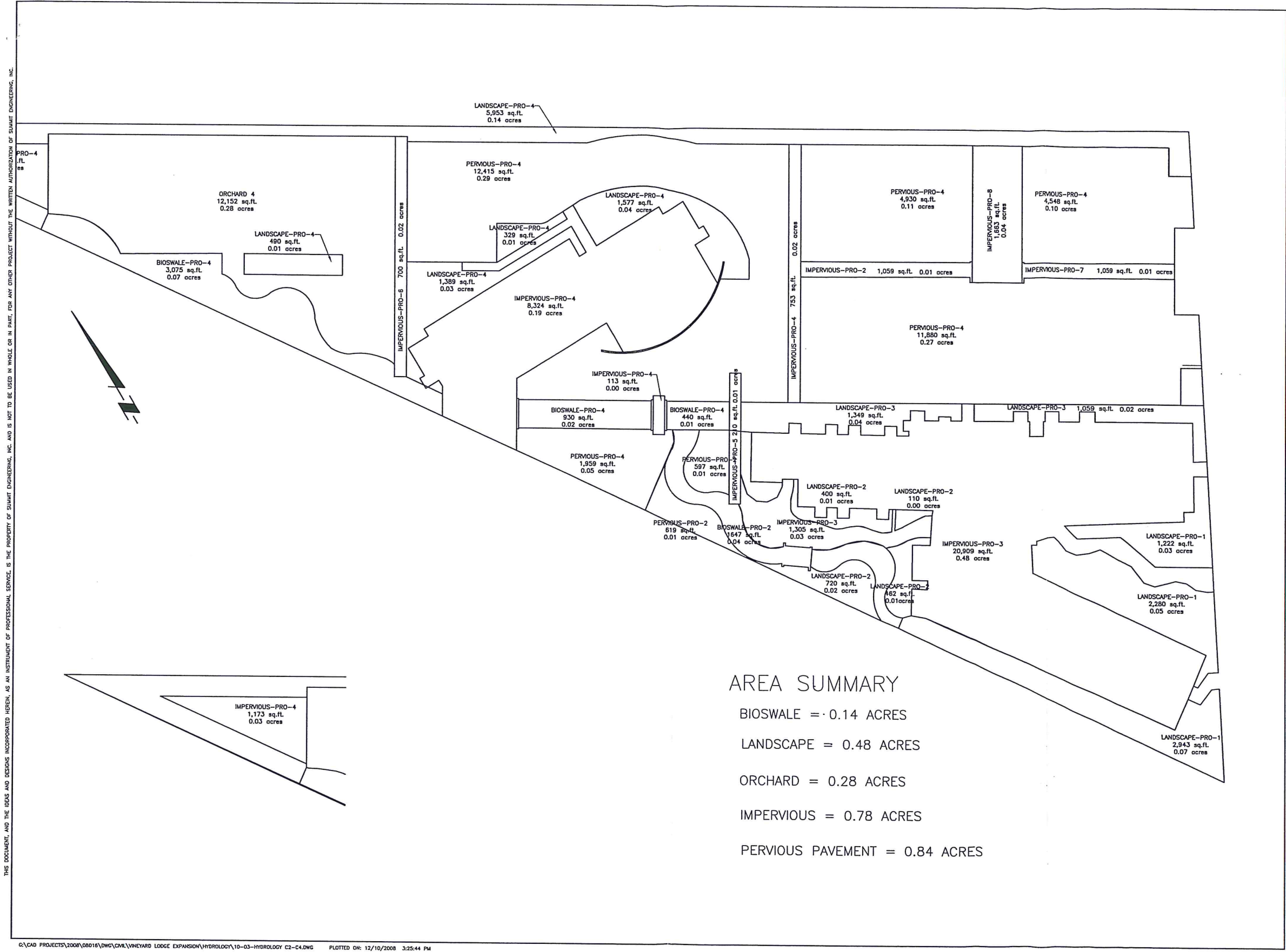
EXISTING HYDROLOGY AREAS

CULINARY INSTITUTE OF AMERICA  
830 PRATT AVENUE  
ST. HELENA, CALIFORNIA  
APN 009-010-024



SUMMIT ENGINEERING INC.

463 AVIATION BLVD. #200  
SANTA ROSA, CA 95403  
Phone 707.527.0775 Fax 707.527.0212



|                                                                                                       |           |
|-------------------------------------------------------------------------------------------------------|-----------|
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| 463 AVIATION BLVD. #200<br>SANTA ROSA, CA 95403<br>Phone 707.527.0775 Fax 707.527.0212                |           |
| <b>CULINARY INSTITUTE OF AMERICA</b><br>830 PRATT AVENUE<br>ST. HELENA, CALIFORNIA<br>APN 008-010-024 |           |
| <b>VINEYARD LODGE EXPANSION</b>                                                                       |           |
| <b>PROPOSED HYDROLOGY AREAS</b>                                                                       |           |
| DATE:                                                                                                 | 12-11-08  |
| JOB NO:                                                                                               | 2008016   |
| SCALE:                                                                                                | AS SHOWN  |
| DRAWN:                                                                                                | NP        |
| CHECKED:                                                                                              | BG        |
| SHEET                                                                                                 | <b>H2</b> |

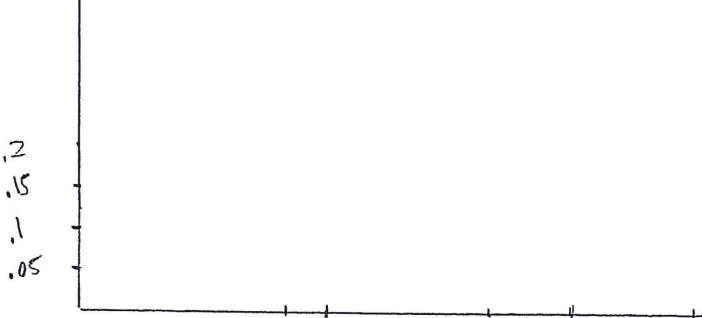


|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                    |                                                                                                                                                                                                                                                                                                                             |                          |                     |                         |                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------|-------------------------|-----------------------|
| <p style="font-size: 2em; margin: 0;">CIA</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <br><b>SUMMIT</b> | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">PROJECT NO. <u>08016</u></td> <td style="padding: 2px;">DATE <u>6/18/08</u></td> </tr> <tr> <td style="padding: 2px;">BY <u>CRA</u>    CHK _____</td> <td style="padding: 2px;">SHT NO _____ OF _____</td> </tr> </table> | PROJECT NO. <u>08016</u> | DATE <u>6/18/08</u> | BY <u>CRA</u> CHK _____ | SHT NO _____ OF _____ |
| PROJECT NO. <u>08016</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | DATE <u>6/18/08</u>                                                                                |                                                                                                                                                                                                                                                                                                                             |                          |                     |                         |                       |
| BY <u>CRA</u> CHK _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | SHT NO _____ OF _____                                                                              |                                                                                                                                                                                                                                                                                                                             |                          |                     |                         |                       |
| <p>TOTAL AREA (EXCLUDING EXISTING PARKING) = 1.06 ACRES</p> <p>PRE CONSTRUCTION: IMPERVIOUS = 0 ACRE (0%)<br/> PERVIOUS = 1.06 ACRE (100%)</p> <p>POST CONSTRUCTION: IMPERVIOUS = .9 ACRES (85%)<br/> PERVIOUS = .16 ACRES (15%)</p> <p>SITE FALLS UNDER LEEDS STORMWATER QUANTITY CONTROL CASE 1 - EXISTING IMPERVIOUSNESS <math>\leq</math> 50%</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><u>PRE CONSTRUCTION</u></p> <p><math>C = .34</math></p> </div> <div style="width: 50%;"> <p>VOLUME (<math>V = .08CKA</math>) AS PER SUSWMP</p> <p><math>V = (.08)(.34)(1.2)(1.06)</math></p> <p><math>= .035 \text{ ACRE-FT} \cdot 43,560 \text{ FT}^3/\text{ACRE}</math></p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <math>V_{pre} = 1,507 \text{ FT}^3</math> </div> </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="width: 45%;"> <p><u>POST CONSTRUCTION</u></p> <p><math>C_w = \frac{(.34)(.16) + (.9)(.9)}{.16 + .9}</math></p> <p><math>C_w = .815</math></p> </div> <div style="width: 50%;"> <p><math>V = (.08)(.815)(1.2)(1.06)</math></p> <p><math>= .0829 \text{ ACRE-FT} \cdot 43,560 \text{ FT}^3/\text{ACRE}</math></p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <math>V_{post} = 3,612 \text{ FT}^3</math> </div> </div> </div> <div style="margin-top: 20px;"> <p><u>VOLUME DIFFERENCE</u> = <math>V_{post} - V_{pre}</math></p> <p><math>= 3,612 \text{ FT}^3 - 1,507 \text{ FT}^3 = \boxed{2,105 \text{ FT}^3}</math></p> </div> |                                                                                                    |                                                                                                                                                                                                                                                                                                                             |                          |                     |                         |                       |

CONT. →



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                    |                                                                                                                                                                                                                                                                                             |                          |            |          |           |                        |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------|----------|-----------|------------------------|--|
| <p style="font-size: 2em; margin: 0;">CIA</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  <p style="margin: 0;">SUMMIT</p> | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">PROJECT NO. <u>08016</u></td> <td style="width: 50%;">DATE _____</td> </tr> <tr> <td>BY _____</td> <td>CHK _____</td> </tr> <tr> <td colspan="2">SHT NO. _____ OF _____</td> </tr> </table> | PROJECT NO. <u>08016</u> | DATE _____ | BY _____ | CHK _____ | SHT NO. _____ OF _____ |  |
| PROJECT NO. <u>08016</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | DATE _____                                                                                                         |                                                                                                                                                                                                                                                                                             |                          |            |          |           |                        |  |
| BY _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | CHK _____                                                                                                          |                                                                                                                                                                                                                                                                                             |                          |            |          |           |                        |  |
| SHT NO. _____ OF _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                    |                                                                                                                                                                                                                                                                                             |                          |            |          |           |                        |  |
| <p style="margin: 0;">VOLUME USING LEED SEMI-ARID WATERSHED DATA</p> <p style="margin: 0;">.75 INCHES OVER 1.06 ACRE <math>\left( V = \frac{P R_v A}{12'} \right) P = .75</math></p> <p style="margin: 0;"><math>\frac{.75''}{12''/ft} \cdot 1.06 \text{ ACRE} \cdot 43,560 \text{ ft}^2/\text{ACRE}</math></p> <p style="margin: 0;"><math>= \boxed{288.6 \text{ ft}^3}</math></p> <p style="margin: 0; text-align: right;"><math>R_v = 0.05 + .009(i)</math><br/><math>i = \% \text{ IMPERVIOUSNESS}</math></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                    |                                                                                                                                                                                                                                                                                             |                          |            |          |           |                        |  |
| <p style="margin: 0;">Q <span style="float: right;">USING <math>i = .19</math> (FROM NOAA)</span></p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <math>Q_{pre} = (.34)(.19)(1.06)</math><br/> <math>\boxed{Q_{pre} = .068 \text{ cfs}}</math> </div> <div style="text-align: center;"> <math>Q_{post} = (.815)(.19)(1.06)</math><br/> <math>\boxed{Q_{post} = .164 \text{ cfs}}</math> </div> </div> <p style="margin: 0;">COMPARE WITH: <math>i = 1.68</math> (FROM <math>i = 5.12 (V)^{.91469} (t)^{.4528}</math> <span style="float: right;"><math>y=2</math><br/><math>t=10</math></span>)</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <math>Q_{pre} = (.34)(1.68)(1.06) = \boxed{.605 \text{ cfs}}</math> </div> <div style="text-align: center;"> <math>Q_{post} = (.815)(1.68)(1.06)</math><br/> <math>= \boxed{1.45 \text{ cfs}}</math> </div> </div>                                                                                          |                                                                                                                    |                                                                                                                                                                                                                                                                                             |                          |            |          |           |                        |  |
| <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p style="margin: 0;">ROOF AREA = .14 ACRES</p> <p style="margin: 0;">USING <math>i = .19</math></p> <p style="margin: 0;"><math>Q = (.9)(.19)(.14)</math></p> <p style="margin: 0;"><math>Q = .024 \text{ cfs}</math></p> <p style="margin: 0;">ROOF VOLUME AS PER SUMMP</p> <p style="margin: 0;"><math>V = (.08)(.9)(1.2)(.14)</math></p> <p style="margin: 0;"><math>V = .012 \text{ Acre} \cdot 43,560 \text{ ft}^2/\text{ACRE}</math></p> <p style="margin: 0;"><math>V = 527. \text{ ft}^3</math></p> </div> <div style="width: 45%;"> <p style="margin: 0;">USING <math>i = 1.68</math></p> <p style="margin: 0;"><math>Q = (.9)(1.68)(.14)</math></p> <p style="margin: 0;"><math>Q = .211</math></p> <p style="margin: 0;">ROOF VOLUME AS PER LEEDS</p> <p style="margin: 0;"><math>V = \frac{.75''}{12''/ft} \cdot (.14 \text{ ACRE}) (43,560 \text{ ft}^2/\text{ACRE})</math></p> <p style="margin: 0;"><math>V = 381. \text{ ft}^3</math></p> </div> </div> |                                                                                                                    |                                                                                                                                                                                                                                                                                             |                          |            |          |           |                        |  |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                         |                                                                                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| <p>2Yr 24 hr</p> <p><math>C_{pre} = .55</math>      <math>C_{post} = .85</math></p> <p><math>t_{c pre} = 10 \text{ min}</math>      <math>T_{c post} = 8 \text{ min}</math></p> <p><math>I = .19 \text{ in/hr of 24 hr}</math></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <br><b>S U M M I T</b> | <p>PROJECT NO. <u>0846</u>      DATE _____</p> <p>BY _____      CHK _____      SHT NO _____ OF _____</p> |
| <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><math>Q_{pre} = CIA = (.55)(.19)(1.73)</math></p> <p><span style="border: 1px solid black; padding: 2px;"><math>Q_{pre} = .18 \text{ cfs}</math></span></p> <p><math>Q_{post} = CIA = (.85)(.19)(1.73)</math></p> <p><span style="border: 1px solid black; padding: 2px;"><math>Q_{post} = .28 \text{ cfs}</math></span></p> </div> <div style="width: 50%;">  </div> </div> <div style="margin-top: 20px;"> <p><math>V_s = T_d Q_p - Q_A T_d - Q_A T_p + \frac{(\alpha Q_A T_p)}{2} + \frac{Q_A^2 T_p}{2Q_p}</math></p> <p><math>T_d = \text{duration in min.} = 1440 \text{ ? (NOT POSSIBLE)}</math></p> <p><math>Q_p = \text{Peak } Q_{post} = .28</math></p> <p><math>Q_A = \text{Peak } Q_{pre} = .18</math></p> <p><math>T_p = \text{peak } T_{post} = 8</math></p> <p><math>\alpha = \frac{T_{pre}}{T_{post}}</math></p> <p><math>V_s = \left( \frac{10}{8} \right) (.18)(8) - (.18)(1440) - (.28)(8) + \frac{(\frac{10}{8})(.18)(8)}{2} + \frac{(.18)^2 \cdot 8}{2(.28)}</math></p> <p><math>403.2 - 259.2 - 2.24 + .9 + .462857</math></p> <p><math>= (143.123) \cdot 60 \text{ s/min} = \boxed{8,587 \text{ cf}}</math></p> </div> |                                                                                                         |                                                                                                          |

|                  | Area(acre) | C    | K   | i    | Volume(cu.ft.) | Q(cfs)   |
|------------------|------------|------|-----|------|----------------|----------|
| Job site(pre)    | 1.73       | 0.55 | 1.2 | 0.19 | 3978.94464     | 0.180785 |
| Job site(post)   | 1.73       | 0.85 | 1.2 | 0.19 | 6149.27808     | 0.279395 |
| Impervious(pre)  | 0.67       | 0.9  | 1.2 | 0.19 | 2521.60128     | 0.11457  |
| Pervious(pre)    | 1.06       | 0.34 | 1.2 | 0.19 | 1507.106304    | 0.068476 |
| Impervious(post) | 1.57       | 0.9  | 1.2 | 0.19 | 5908.82688     | 0.26847  |
| Pervious(post)   | 0.16       | 0.34 | 1.2 | 0.19 | 227.487744     | 0.010336 |
| Roof             | 0.14       | 0.9  | 1.2 | 0.19 | 526.90176      | 0.02394  |

|                   |             |
|-------------------|-------------|
| Pasture           | 0.12 - 0.62 |
| Residential areas | 0.3 - 0.75  |
| Business areas    | 0.5 - 0.95  |
| Industrial areas  | 0.5 - 0.9   |
| Asphalt streets   | 0.7 - 0.95  |
| Brick streets     | 0.7 - 0.85  |
| Roofs             | 0.75 - 0.95 |
| Concrete streets  | 0.7 - 0.95  |

**Error Messages given by calculation**

"Need  $0 < c < 1$ ", "Need  $i > 0$ " "Need  $A > 0$ ". Input values must be in these ranges.

**References and Bibliography**

Chin, David A. 2000. Water-Resources Engineering. Prentice-Hall.

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|                                                                                                                                                                                                                                                                                                              |                                                                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| <b>Rational<br/>Equation<br/>Calculator</b>                                                                                                                                                                                                                                                                  | Compute peak discharge from a drainage basin using the Rational equation |
| <a href="#">To: Time of Concentration Calculation</a><br><a href="#">SCS TR-55 Peak Discharge Calculator</a> <a href="#">Detention Storage Calculator</a><br><a href="#">Unit Conversions Calculator</a><br><a href="#">LMNO Engineering home page (more calculations)</a> <a href="#">Trouble printing?</a> |                                                                          |

[www.LMNOeng.com](http://www.LMNOeng.com)


|                                 |                                               |                                                         |
|---------------------------------|-----------------------------------------------|---------------------------------------------------------|
| Rational runoff coefficient, c: | <input type="text" value="0.4"/>              |                                                         |
| Rainfall intensity, i:          | <input type="text" value="3.5"/>              | <input type="text" value="inch/hour"/>                  |
| Drainage area, A:               | <input type="text" value="12.0"/>             | <input type="text" value="acre"/>                       |
| Peak discharge, Q:              | <input type="text" value="Will be computed"/> | <input type="text" value="cubic foot per second, cfs"/> |

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The Rational equation is the simplest method to determine peak discharge from drainage basin runoff. It is not as sophisticated as the [SCS TR-55 method](#), but is the most common method used for sizing sewer systems.

Rational Equation:  $Q=ciA$

The Rational equation requires the following units:

Q = Peak discharge, cfs

c = Rational method runoff coefficient

i = Rainfall intensity, inch/hour

A = Drainage area, acre

Note that our calculation allows you to use a variety of units.

The Rational method runoff coefficient (c) is a function of the soil type and drainage basin slope. A simplified table is shown below. See the references at the bottom of the page for more complete tables including impact of slope.

The Rainfall intensity (i) is typically found from Intensity/Duration/Frequency curves for rainfall events in the geographical region of interest. The duration is usually equivalent to the [time of concentration](#) of the drainage area. The storm frequency is typically stated by local authorities depending on the impact of the development. A 10-yr, 25-yr, 50-yr, or even 100-yr storm frequency may be specified.

#### Simplified Table of Rational Method Runoff Coefficients (see references below)

| Ground Cover      | Runoff Coefficient, c |
|-------------------|-----------------------|
| Lawns             | 0.05 - 0.35           |
| Forest            | 0.05 - 0.25           |
| Cultivated land   | 0.08-0.41             |
| Meadow            | 0.1 - 0.5             |
| Parks, cemeteries | 0.1 - 0.25            |
| Unimproved areas  | 0.1 - 0.3             |



WASTEWATER FEASIBILITY  
STUDY

Culinary Institute of America –  
Vineyard Lodge

830 Pratt Ave, St. Helena, California

APN 009-010-024



Project No. 2016040

June 15, 2016

Revised: September 2, 2016



CIA – Vineyard Lodge  
Wastewater Feasibility Study  
June 15, 2016  
Revised: September 2, 2016

SUMMIT ENGINEERING, INC.  
Project No. 2016040

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- Enclosure B:     Manufacturer’s Specification Sheets for Fixtures

CIA – Vineyard Lodge  
Wastewater Feasibility Study  
June 15, 2016  
Revised: September 2, 2016

SUMMIT ENGINEERING, INC.  
Project No. 2016040

## PROJECT OVERVIEW

The Culinary Institute of America Vineyard Lodge is applying for a Use Permit modification for improvements to the existing dormitory facility located at 830 Pratt Avenue, in St. Helena (APN 009-010-024). The project site is located approximately ¼ mile east of Highway 29, and in the northern portion of the St. Helena city limits. The project site extends over a gently sloping terrain along the valley floor, sloping northeast at approximately 3% or less towards the Napa River.

The Vineyard Lodge site is made up of a single 2.61 acre parcel, with two existing dormitory buildings, Vineyard Lodge 1 and Vineyard Lodge 2, housing 41 and 60 beds, respectively. The Use Permit Application includes demolition of the existing 41-bed dormitory and construction of three new dormitory buildings. The new dormitories will provide a total of 164 new beds, for a net increase of 123 beds. The new dormitories will provide capacity for 224 residents.

The existing sanitary sewage (SS) system serving the dormitories consists of a primary treatment system that discharges primary treated SS into the City of St. Helena sewer system, through an existing 3" SS existing force main and flowmeter located along the southwestern edge of the parcel. The primary treatment system consists of existing 2,000 gallon and 2,500 gallon septic tanks receiving SS from the newer Vineyard Lodge 2 building, and an approximate 2,000 gallon septic tank serving the older Vineyard Lodge 1 building. A pump sump collects SS effluent from both septic tank systems and pumps it into the City of St. Helena sewer collection system via the 3" SS force main. The pump sump has demand activated duplex lead/lag pumps and is controlled by float switches.

The upgraded SS primary treatment system will utilize new septic and pump tanks to serve the proposed buildings and the existing 60-bed dormitory. A new equalization pump tank will be used to collect and store all flows from the site, and discharge to the City of St. Helena sewer system via connection to the existing SS force main. The equalization pump tank will utilize onsite storage capacity and equivalent pumps to maintain the same instantaneous peak flow of the existing facilities. Summit Engineering has prepared the following Wastewater Feasibility Study outlining the proposed SS flows, and associated collection, storage and discharge systems.

## SANITARY SEWAGE MANAGEMENT SYSTEM

Vineyard Lodge intends to utilize and improve the existing SS wastewater management in accordance with all City of St. Helena Department of Public Works wastewater collection requirements. SS flows will undergo primary treatment in septic tanks, which will produce effluent that is of higher quality than residential wastewater. Primary treated effluent will be conveyed to the municipal sewer system through the existing 3-inch diameter SS force main and relocated flowmeter on the parcel.

The proposed SS management system has been sized for a peak daily wastewater flow of approximately 9,605 gallons per day (gpd), a projected net increase of 3,232 gpd over the existing average recorded flow of 6,373 gpd.

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 Revised: September 2, 2016

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### **SANITARY SEWAGE CHARACTERISTICS**

SS will consist primarily of wastewater generated from dormitory restrooms, showers, and common areas. Typical SS is expected to be similar to residential strength wastewater, with characteristics summarized below:

**TABLE 1. TYPICAL SANITARY SEWER CHARACTERISTICS**

| <b><u>Characteristic</u></b>    | <b><u>Units</u></b> | <b><u>Raw Wastewater Range<sup>1</sup></u></b> |
|---------------------------------|---------------------|------------------------------------------------|
| BOD <sub>5</sub>                | mg/L                | 110 - 220                                      |
| Grease                          | mg/L                | 50-100                                         |
| Total Suspended Solids (TSS)    | mg/L                | 100 - 220                                      |
| Volatile Suspended Solids       | mg/L                | 80 - 165                                       |
| Total Dissolved Solids (TDS)    | mg/L                | 250 - 500                                      |
| Nitrogen                        | mg/L                | 20 - 40                                        |
| Nitrate                         | mg/L                | 0                                              |
| Phosphorous                     | mg/L                | 4 - 8                                          |
| Alkalinity (CaCO <sub>3</sub> ) | mg/L                | 50 - 100                                       |
| Chloride                        | mg/L                | 30 - 50                                        |
| Sulfate                         | mg/L                | 20 - 30                                        |

<sup>1</sup>Typical composition of untreated domestic wastewater, Metcalf & Eddy, "Wastewater Engineering, Third Edition", 1991

### **DORMITORY SANITARY SEWAGE DESIGN FLOWS**

The proposed SS management system at Vineyard Lodge will convey wastewater generated from the dormitory restrooms, showers and common areas. Students will spend a large portion of their day outside of the dormitories, so a lower estimate than the typical daily per capita water use has been used to calculate wastewater generation. The average daily water use for the Pratt Avenue site from May 2014 through May 2015 was 6,373 gpd based on billing records, with a total occupancy of 101 residents, resulting in an average water demand of approximately 63 gpcd. The water use records also include irrigation at the facility, therefore the 63 gpcd wastewater generation estimate is conservative. The Environmental Protection Agency's Onsite Wastewater Treatment Systems manual recommends a daily flow rate of 25-60 gpcd for boarding houses, with 40 gpcd being typical, so the data based flow estimate is in line with industry standards and recommendations.

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Peak Day Wastewater Generation – Existing Dormitory Building

|                                      |    |   |    |      |   |              |            |
|--------------------------------------|----|---|----|------|---|--------------|------------|
| Full-time Residents                  | 60 | x | 63 | gpcd | = | 3,780        | gpd        |
| <b>Existing Building Design Flow</b> |    |   |    |      | = | <b>3,780</b> | <b>gpd</b> |

Additionally, the City of St. Helena Water Neutral Policy for Development provides a method for estimating proposed water demand based on fixture flow rates and use assumptions. The following calculations show that the estimated residential wastewater generation for the proposed buildings should be approximately 35 gpcd.

Peak Day Wastewater Generation – Proposed Dormitory Buildings

| Fixture                                       |   | Flow Rate     |   | Flow Duration          |   | Occupants     |   | Water Use        |
|-----------------------------------------------|---|---------------|---|------------------------|---|---------------|---|------------------|
| Toilet                                        | x | 1.3 gal/flush | X | 3 flushes/day/occupant | X | 164 occupants | = | 640 gpd          |
| Showerhead                                    | x | 1.5 gal/min   | x | 8 min/day/occupant     | X | 164 occupants | = | 1,968 gpd        |
| Sink Faucet                                   | x | 0.5 gal/min   | x | 0.75 min/day/occupant  | X | 164 occupants | = | 62 gpd           |
| Kitchen Faucet                                | x | 1.5 gal/min   | x | 4 min/day/occupant     | X | 164 occupants | = | 984 gpd          |
| Kitchen Faucet (Dishwashing)                  | x | 1.5 gal/min   | x | 1.27 min/day/occupant  | X | 164 occupants | = | 309 gpd          |
| Clothes Washer                                | x | 19.7 gal/load | x | 0.37 load/day/occupant | X | 164 occupants | = | 1,195 gpd        |
| <b>Proposed Design Flow for New Buildings</b> |   |               |   |                        |   |               | = | <b>5,157 gpd</b> |

Manufacturer's specification sheets for the included fixtures are included in Enclosure B. No dishwashers will be installed in the kitchen/common areas. To account for the additional flow required to hand wash dishes, an additional kitchen faucet source was included, equivalent to three times the anticipated dishwasher wastewater generation anticipated in the City of St. Helena Water Neutral Policy guidelines. The estimated dishwasher generation rate is based on 6.3 gal/load, 0.1 load/day/occupant, and 164 occupants, for a total of approximately 103 gallons per day. Therefore 309 gpd was added to the kitchen faucet use, or 1.26 min/occupant/day in addition to the typical 4 min/day/occupant assumed in the Water Neutral Policy. This should adequately account for the amount of additional water used per occupant at the kitchen faucet for dishwashing purposes.

The 164 occupants total within the three new buildings should produce an approximate total of 5,157 gpd of wastewater based on the proposed fixtures, which equates to 31.5 gpcd. The wastewater design flow rate for the proposed buildings has been increased to 35 gpcd to provide an additional factor of safety. The total SS generation of each dormitory building (existing and proposed), after the 41-bed dormitory is demolished, is as follows:

DESIGN CRITERIA – Existing Building to Remain

Peak Day

|                             |    |   |    |      |   |              |            |
|-----------------------------|----|---|----|------|---|--------------|------------|
| Full-time Students          | 60 | x | 63 | gpcd | = | 3,780        | gpd        |
| <b>Existing Design Flow</b> |    |   |    |      | = | <b>3,780</b> | <b>gpd</b> |

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#### DESIGN CRITERIA – Three New Lodge Buildings

##### Peak Day

|                                            |     |   |         |   |                  |
|--------------------------------------------|-----|---|---------|---|------------------|
| Full-time Students                         | 164 | x | 35 gpcd | = | 5,740 gpd        |
| <b>New Buildings Total Design Flow</b>     |     |   |         |   | <b>5,740 gpd</b> |
| <b>TOTAL PEAK DAY FLOW = ALL BUILDINGS</b> |     |   |         | = | <b>9,520 gpd</b> |

**TOTAL SITE DESIGN FLOW = 9,520 gpd**

The SS management system will be designed to handle a peak daily SS flow of 3,780 gpd from the existing building, and 5,740 gpd from new buildings, for a total SS flow of 9,520 gpd.

#### SANITARY SEWAGE CONVEYANCE, TREATMENT AND DISPOSAL

The SS treatment and disposal system will have the components described below. Refer to Enclosure A for the SS management system schematic. The overall system will include:

- ◆ An existing pump station and new septic tank for the existing Vineyard Lodge 2 building.
- ◆ A new septic/pump tank for Building A
- ◆ A new septic tank for Building B (shared with the Vineyard Lodge 2 building)
- ◆ A new septic tank for Building C
- ◆ A combined effluent equalization pump tank, which will collect and store wastewater from the entire site, and discharge to the existing 3-inch SS force main.

#### Gravity Collection

The gravity collection system from the new lodge buildings will be designed to provide low maintenance and no infiltration or exfiltration. Piping shall be compatible with sanitary sewage and satisfy Uniform Plumbing Code and local requirements.

#### Septic Tanks

Although not required prior to discharge to the City sewer system, septic tanks are provided and sized per UPC guidelines. Solids settling and digestion in the septic tanks helps to reduce BOD and TSS concentrations entering the City sewer system, reducing the potential for clogging and hydrogen sulfide attack of the pumping and transmission system. Septic tank sizing is determined as follows:

##### Uniform Plumbing Code Method:

$$Volume = 1,125 + 0.75 \times Flow Rate$$

##### Individual Tankage Requirements

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|                                      |       |     |   |      |   |       |     |   |                 |
|--------------------------------------|-------|-----|---|------|---|-------|-----|---|-----------------|
| Building A                           | 2,450 | gpd | x | 0.75 | + | 1,125 | gpd | = | 2,962           |
| Building B                           | 1,855 | gpd | x | 0.75 | + | 1,125 | gpd | = | 2,516           |
| Building C                           | 1,400 | gpd | x | 0.75 | + | 1,125 | gpd | = | 2,175           |
| (E) Vineyard Lodge 2                 | 2,700 | gpd | x | 0.75 | + | 1,125 | gpd | = | 3,150           |
| <b>TOTAL TANKAGE - ALL BUILDINGS</b> |       |     |   |      |   |       |     |   | <b>= 10,803</b> |

Primary tanks will be provided for each building, and sized according to the guidelines listed above:

- ◆ Building A will have 3,000 gallons of primary retention in a combined septic and pump tank, with effluent from the septic compartment pumped to the combined equalization pump storage tank described in detail below.
- ◆ Building B will have a separate 2,500 primary tank, with effluent flowing by gravity into the combined equalization tank.
- ◆ A new 5,000 gallon septic tank will be installed adjacent to Building C.
- ◆ The existing pump sump located outside of the existing VL2 building will be redirected to the new 5,000 septic tank outside Building C, with the existing 2,000 and 2,500 gallon tanks serving VL2 removed or abandoned in-place.

Overall, the total recommended primary tank volume of 10,800 gallons will be exceeded by the available 13,000 gallons of septic tankage upstream of the equalization pump tank. SS should enter the septic tanks at approximately residential strength, and the proposed septic tank capacity will provide settling and decomposition within the tanks. The resulting primary treated effluent entering the City's collection system will therefore exceed residential sewage quality as required by the City of St. Helena.

#### Equalization Pump Tank

Effluent from the septic tanks will be collected in a combined 5,000 gallon equalization pump tank that will be utilized for equalization volume and peak flow storage. The equalization tank will provide approximately 12.5 hours of retention time at the peak daily flowrate of 9,520 gpd, and is sufficiently sized to allow for only off-peak discharge to the City sewer. In order to calculate the water level within the tank during the design day, a typical diurnal wastewater generation curve was developed according to the data provided by Crites and Tchobanoglous (*Small and Decentralized Wastewater Management Systems*, pg. 188). The diurnal flow pattern of residential wastewater flow was normalized so that the hourly inflow to the equalization tank is the product of the peak flow factor and the average daily wastewater generation (Figure 1).

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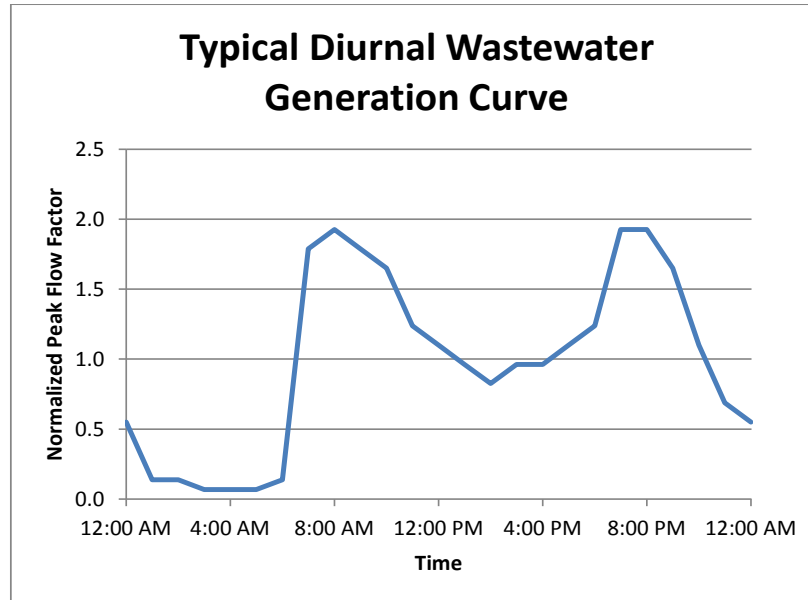


Figure 1. Typical diurnal pattern of wastewater generation from residential sources

The existing pump utilized to convey SS to the city sewer system is sized at 30 gpm and will be programmed to provide a dose volume of approximately 400 gallons, or just less than a 13.3 minute pump cycle. This will allow the pump to operate on an average of once per hour (24 doses total) throughout the design day, although the doses will be distributed across only non-peak hours (12pm to 5pm and 10pm to 5am). The following table shows a volume balance on the equalization tank throughout the design day, with inflow determined by the average daily flow and peak flow factor from the diurnal curve, and outflow governed by dosing to the city sewer.

Equalization Tank Volume, 24-hour period

| Time:    | Inflow<br>(gal) | Pump<br>Doses | Outflow<br>(gal) | Initial<br>Volume<br>(gal) | End<br>Volume<br>(gal) |
|----------|-----------------|---------------|------------------|----------------------------|------------------------|
| 7:00 AM  | 709             | 0             | 0                | 0                          | 709                    |
| 8:00 AM  | 764             | 0             | 0                | 709                        | 1,473                  |
| 9:00 AM  | 709             | 0             | 0                | 1,473                      | 2,182                  |
| 10:00 AM | 655             | 0             | 0                | 2,182                      | 2,837                  |
| 11:00 AM | 491             | 0             | 0                | 2,837                      | 3,328                  |
| 12:00 PM | 436             | 1             | 397              | 3,328                      | 3,367                  |
| 1:00 PM  | 382             | 2             | 794              | 3,367                      | 2,955                  |
| 2:00 PM  | 327             | 2             | 794              | 2,955                      | 2,489                  |
| 3:00 PM  | 382             | 2             | 794              | 2,489                      | 2,076                  |



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|          |     |   |     |       |              |
|----------|-----|---|-----|-------|--------------|
| 4:00 PM  | 382 | 2 | 794 | 2,076 | 1,664        |
| 5:00 PM  | 436 | 1 | 397 | 1,664 | 1,704        |
| 6:00 PM  | 491 | 0 | 0   | 1,704 | 2,195        |
| 7:00 PM  | 764 | 0 | 0   | 2,195 | 2,959        |
| 8:00 PM  | 764 | 0 | 0   | 2,959 | 3,722        |
| 9:00 PM  | 655 | 0 | 0   | 3,722 | <b>4,377</b> |
| 10:00 PM | 436 | 2 | 794 | 4,377 | 4,019        |
| 11:00 PM | 273 | 1 | 397 | 4,019 | 3,895        |
| 12:00 AM | 218 | 2 | 794 | 3,895 | 3,319        |
| 1:00 AM  | 55  | 2 | 794 | 3,319 | 2,580        |
| 2:00 AM  | 55  | 2 | 794 | 2,580 | 1,841        |
| 3:00 AM  | 27  | 2 | 794 | 1,841 | 1,074        |
| 4:00 AM  | 27  | 1 | 397 | 1,074 | 704          |
| 5:00 AM  | 27  | 1 | 397 | 704   | 334          |
| 6:00 AM  | 55  | 1 | 402 | 334   | 0            |

This equalization pump tank will utilize the existing (or comparably sized) pumps without increasing their peak pumping capacity. As a result, there will be no increase to the instantaneous flow rate to the City sewer system, and therefore no adverse effect on the sewer system capacity. The equalization storage is utilized to prevent pump operation during the assumed peak hours of 7AM through 12 PM, and 5 PM through 10 PM, possibly reducing the instantaneous peak flow to the City sewer, since the current discharge pattern is on-demand. The maximum volume within the tank is expected to be less than 5,000 gallons at all times, with the overnight hours between 10 PM and 6 AM being used to empty the tank. At no point in time will the instantaneous peak flow entering the City sewer system exceed 30 gpm, to coincide with the peak flow of the current pump sump. The existing pump sump is sized for the capacity of receiving sewers within the City's collection system, and will not be increased in size in order to maintain the existing peak flow to the City sewer system.

#### **Flow Measurement**

The existing flow meter will be relocated and utilized to measure the discharge of SS flows into the City's collection, pumping and treatment system and for facility record keeping.

#### **City of St. Helena Sewer System**

No increases in peak flows are proposed to the City sewer system, and the timed dosing of primary treated effluent during off-peak hours should prevent any adverse impacts to the City sewers. Therefore, a detailed capacity analysis of City's sewer system components is not required.

### **OTHER CONSIDERATIONS**

#### **ODOR CONTROL**

There should be no noxious odors from a properly designed and operated treatment system. See Alternative Courses of Action for operation alternatives.

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### **PROTECTION**

The primary treatment septic system will be protected to restrict access and potential damage to the system, including the use of locking covers for the septic tanks and bollards to prevent vehicle traffic above the underground tanks where located adjacent to traffic areas. Tanks installed in traffic areas will be H-20 traffic rated.

### **ALTERNATIVE COURSES OF ACTION**

Should there be any unforeseen operational difficulties for the SS management system, the following additional courses of action would be available if necessary:

- ◆ Temporary pumping and truck transfer of wastewater to an approved treatment plant would be used as additional courses of action.
- ◆ Additional stages of primary treatment to increase effluent quality discharged to the sewer system.
- ◆ Installation of additional pump tank storage to increase storage and reduce the peak discharge to the municipal sewer system.
- ◆ Alteration of the pump timer and control scheme to adjust the dosing schedule as necessary, if capacity issues in the city sewer system are identified.

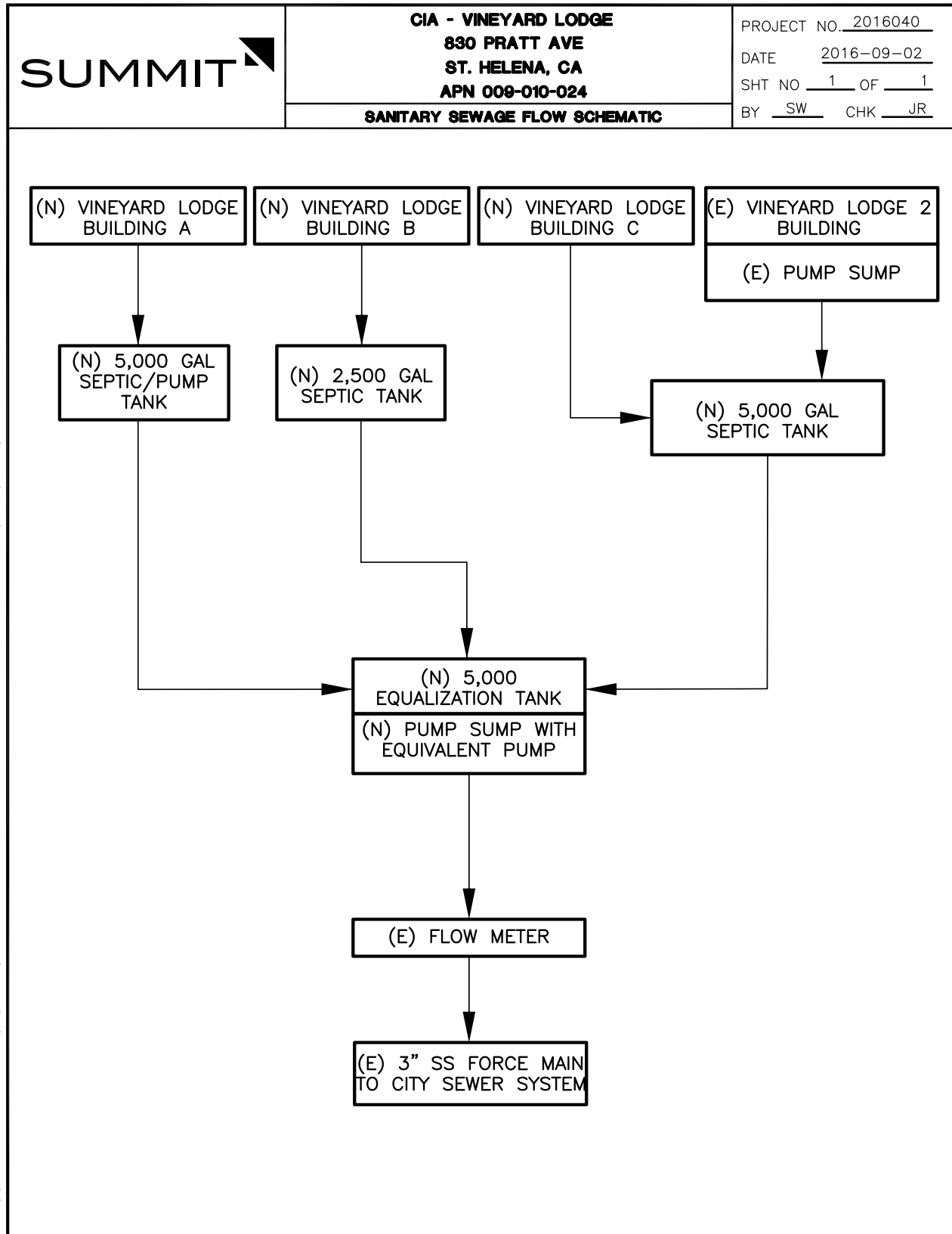
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June 15, 2016  
Revised: September 2, 2016

**SUMMIT ENGINEERING, INC.**  
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**ENCLOSURE A**

**WASTEWATER SYSTEM SCHEMATIC**





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**ENCLOSURE B**

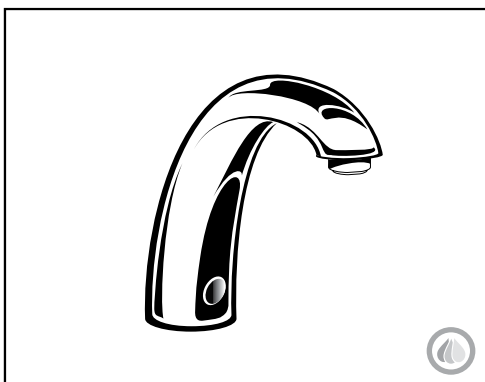
**MANUFACTURER SPECIFICATION SHEETS FOR FIXTURES**



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**L-1**

**SELECTRONIC™**  
**ELECTRONIC PROXIMITY LAVATORY FAUCET**



### GENERAL DESCRIPTION:

Electronic faucet with proximity operation. Vandal-resistant solid brass construction with single post mounting. Operates on DC (battery) or AC permanent power. Water pressure range from 20 to 125 psi. Single inlet 15" flexible stainless steel hose with 3/8" compression fitting for spout connection.

### PRODUCT FEATURES:

**Vandal-Resistant Brass Body:** Durable - Excellent in high use applications.

#### Power Options:

- **Battery** - Approx. 4 years with Lithium Battery CR-P2
- **Plug-In - Integral** low voltage transformer (115 VAC supply) with 6 foot long power supply.

#### Easy and Flexible Installation:

Single post mounting with optional 4" and 8" Deck plate. Water resistant solenoid enclosure mounts to wall.

#### Integrated; Easy Service Strainer:

Patented integrated strainer enclosed in removable debris cup protects the solenoid valve and aerator from debris. Perforated stainless steel strainer is low maintenance and can be easily accessed.

#### Temperature Mixing:

Optional thermostatic mixing valve meets ASSE 1016 performance and anti-scald requirements at 0.5 GPM. Mixing valve will connect directly to solenoid inlet and is housed in matching enclosure.

#### End Device:

Choice of 0.5 GPM (1.9 L/min) pressure compensating, vandal-resistant spray or 1.5 GPM (5.7L/min) pressure compensating, vandal-resistant aerator.

### CODES AND STANDARDS:

These products meet or exceed the following codes & standards:

ANSI A117.1  
ASME A112.18.1  
CSA B 125  
NSF 61/Section 9



**ADA Compliant**

### MODEL NUMBER:

#### DC POWERED; single inlet

- ☒ **6055.105** with cast spout, 0.5 GPM pressure compensating, vandal-resistant spray.
- ☐ **6055.102** with cast spout, 1.5 GPM pressure compensating, vandal-resistant aerator.

#### AC POWERED; single inlet

- ☐ **6056.105** with cast spout, 0.5 GPM pressure compensating, vandal-resistant spray. Includes AC power supply.
- ☐ **6056.102** with cast spout, 1.5 GPM pressure compensating, vandal-resistant aerator. Includes AC power supply.

#### MULTI AC POWERED; single inlet

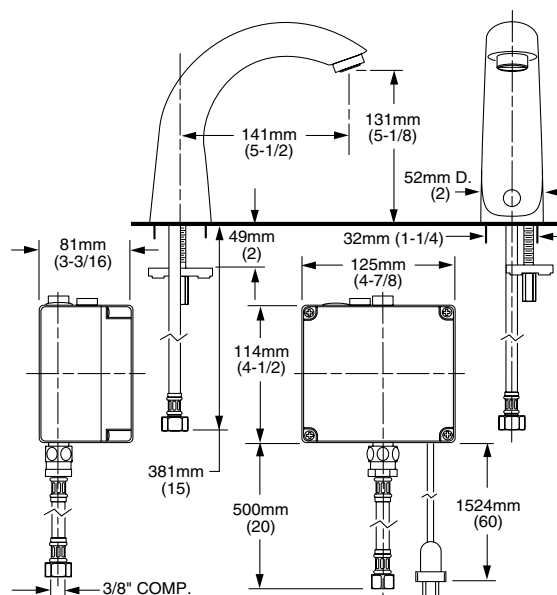
- ☐ **6057.105** with cast spout, 0.5 GPM pressure compensating, vandal-resistant spray. One power supply (sold separately) can operate up to 15 faucets in series. 10' extension cable included.
- ☐ **6057.102** with cast spout, 1.5 GPM pressure compensating, vandal-resistant aerator. One power supply (sold separately) can operate up to 15 faucets in series. 10' extension cable included.

#### OPTIONAL 4" or 8" Deck plates

- ☐ **605P.400** 4" brass deck plate with 1/4" fixation studs and quick spin nuts. (6-1/8" x 2-1/8" x 1/2")
- ☐ **605P.800** 8" brass deck plate with 1/4" fixation studs and quick spin nuts. (10-1/8" x 2-3/8" x 1/2")

#### OPTIONAL Mixing Valve

- ☐ **605XTMV** Thermostatic mixing valve, flex hoses 3/8" compression 20" hose length.



### RECOMMENDED SPECIFICATION

Electronic Proximity Lavatory shall feature vandal resistant all brass body with single inlet, and in-line strainer. Shall also feature a low energy use electronically operated solenoid valve and microprocessor controlled proximity sensors. Shall meet ANSI A112.18.1M and ANSI 117.1 codes. Fitting shall be American Standard Model # 6055\_\_\_\_, 6056\_\_\_\_, 6057\_\_\_\_.

**ELKAY®**  
SPECIFICATIONS

Food Service Flexible Spout Kitchen Faucet  
**Model(s) LKD2442BHC**

**S-1**

**PRODUCT SPECIFICATIONS**

Food Service Flexible Spout Kitchen Faucet. Faucet has a flow rate of 1.5 GPM, and is made of Chrome Plated Brass material, with a Quarter Turn Ceramic Disc valve. Faucet requires 3 faucet holes.

|                                |                                 |
|--------------------------------|---------------------------------|
| <b>Mounting Type:</b>          | Deck Mount                      |
| <b>Special Features:</b>       | Low Flow<br>Removable cartridge |
| <b>Finish:</b>                 | Chrome                          |
| <b>Handle Type:</b>            | 4" Lever Handle                 |
| <b>Deck Clearance:</b>         | 10"                             |
| <b>Spout Reach:</b>            | 8"                              |
| <b>Spout Height:</b>           | 12-1/8"                         |
| <b>Hole Drillings:</b>         | 3                               |
| <b>Material:</b>               | Chrome Plated Brass             |
| <b>Valve Type:</b>             | Quarter Turn Ceramic Disc       |
| <b>Valve Connection:</b>       | 1/2"-14 NPSM                    |
| <b>Flow Rate:</b>              | 1.5 GPM                         |
| <b>Spout Clearance:</b>        | 10"                             |
| <b>Faucet Hole Size (min):</b> | 1-1/4"                          |
| <b>Faucet Hole Spread:</b>     | 4"                              |
| <b>Spout Swing Rotation:</b>   | 360°                            |
| <b>Spout Type:</b>             | Flexible Spout                  |

**Special Note:** All operating parts are replaceable from above deck

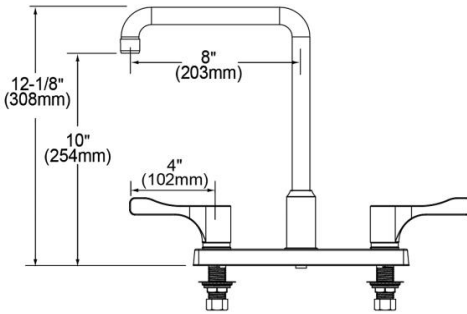


AMERICAN PRIDE. A LIFETIME TRADITION.  
Like your family, the Elkay family has values and traditions that endure. For almost a century, Elkay has been a family-owned and operated company, providing thousands of jobs that support our families and communities.



**Product Compliance:** ADA  
ASME A112.18.1/CSA B125.1  
NSF 372 (lead free)  
NSF 61

[Clean and Care Manual \(PDF\)](#)  
[Installation Instructions \(PDF\)](#)  
[Limited Warranty \(PDF\)](#)



PART: \_\_\_\_\_ QTY: \_\_\_\_\_  
PROJECT: \_\_\_\_\_  
CONTACT: \_\_\_\_\_  
DATE: \_\_\_\_\_  
NOTES: \_\_\_\_\_  
APPROVAL: \_\_\_\_\_

*In keeping with our policy of continuing product improvement, Elkay reserves the right to change product specifications without notice. Please visit [elkay.com](http://elkay.com) for the most current version of Elkay product specification sheets. This specification describes an Elkay product with design, quality, and functional benefits to the user. When making a comparison of other producers' offerings, be certain these features are not overlooked.*





*American Standard*

Style That Works Better

**WASHBROOK® FloWise® UNIVERSAL URINAL**

- Vitreous china
- Ultra High Efficiency, Low Consumption. Operates in the range of 0.125gpf to 1.0gpf (0.5 Lpf to 3.8 Lpf)
- Flushing rim
- Elongated 14" rim from finished wall
- Washout flush action
- Extended sides for privacy
- 3/4" inlet spud
- Outlet connection threaded 2" inside (NPTF)
- 2 wall hangers
- Fixture only
- Strainer included
- Meets ASME flush requirements at 0.125 to 1.0 gpf

☒ **6590.001** Universal Top spud

☐ **6515.001** Universal Back spud

**Nominal Dimensions:**

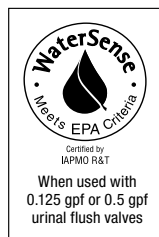
360 x 480 x 664mm

(14-1/8" x 18-7/8" x 26-1/8")

Recommended working pressure – between  
20 psi at valve when flushing and 80 psi static

**Compliance Certifications -****Meets or Exceeds the Following Specifications:**

- ASME A112.19.2-2008/CSA B45.1-08 for Vitreous China Fixtures



**UR-1**

**WASHBROOK® FloWise®  
UNIVERSAL URINAL**  
VITREOUS CHINA



SEE REVERSE FOR ROUGHING-IN DIMENSIONS

**To Be Specified:**

☐ Color: ☐ White

☐ Flush Valve:

1.0 gpf Flush Valve: Sensor-Operated:

☐ American Standard Selectronic® #6063.101.002  
DC Power (Top Spud)

☐ American Standard Selectronic® #6062.310.007  
AC Power (Back Spud)

1.0 gpf Flush Valve: Manual-Operated:

☐ American Standard # 6045.101.002

0.5 gpf Flush Valve: Sensor-Operated:

☐ American Standard Selectronic® #6063.051.002  
DC Power (Top Spud)

☐ American Standard Selectronic® #6062.305.007  
AC Power (Back Spud)

0.5 gpf Flush Valve: Manual-Operated:

☐ American Standard #6045.051.002

0.125 gpf Flush Valve: Sensor-Operated:

☐ American Standard Selectronic® #6063.013.002  
DC Power (Top Spud)

☐ American Standard Selectronic® #6062.301.007  
AC Power (Back Spud)

0.125 gpf Flush Valve: Manual-Operated:

☐ American Standard #6045.013.002



## Sloan ECOS® Flushometers

### ECOS 8111-1.28

WC-1

#### ► Code Number

3370448

#### ► Description

Exposed, Battery Powered, Sensor Activated ECOS® Model Water Closet Flushometer for floor mounted or wall hung top spud bowls.

#### ► Flush Cycle

Model 8113-3.5 Low Consumption (3.5 gpf/13.2 Lpf)

Model 8111 Low Consumption (1.6 gpf/6.0 Lpf)

#### ► Specifications

Quiet, Exposed, Diaphragm Type, Closet Flushometer for either left or right hand supply with the following features:

- Vacuum Breaker Flush Connection and Spud Coupling, Wall and Spud Flanges
- Spud Coupling and Flange for 1½" Top Spud
- Flush Accuracy Controlled by CID Technology
- Sweat Solder Adapter with Cover Tube and Cast Set Screw Wall Flange
- Diaphragm, Stop Seat and Vacuum Breaker to be molded from PERMEX® rubber compound for Chloramine resistance
- Infrared Sensor with Multiple-focused, Lobular Sensing Fields for high and low target detection
- Initial Set-up Range Indicator Light (first 10 minutes)
- User friendly three (3) second Flush Delay
- "Low" Flashing LED
- ADA Compliant Battery Powered Infrared Sensor for automatic "No Hands" operation
- 1" I.P.S. Screwdriver Bak-Chek® Angle Stop with free spinning, vandal resistant Stop Cap with Adjustable Tailpiece
- Infrared Sensor with Multiple-focused, Lobular Sensing Fields for high and low target detection
- Latching Solenoid Operator
- Infrared Sensor Range Adjustment Screw
- Fixed Metering Bypass and No External Volume Adjustment to Ensure Water Conservation
- Flex Tube Diaphragm designed for improved life and reduced maintenance
- Engineered Metal Cover with replaceable Lens Window
- Courtesy Flush® Override Button
- Four (4) Size AA Batteries factory installed

Valve Body, Tailpiece and Control Stop shall be in conformance with ASTM Alloy Classification for Semi-Red Brass. Valve shall be in compliance with the applicable sections of ASSE 1037. Installation conforms to ADA requirements.



#### ► Automatic Operation

Sloan ECOS® Flushometers activate via multi-lobular sensor detection to provide the ultimate in sanitary protection and automatic operation. A battery powered infrared sensor sets the flushing mechanism after the user is detected and Completes the flush when the user steps away.

#### ► Functional & Hygienic

Touchless, sensor operation eliminates the need for user contact to help control the spread of infectious diseases. The G2 Optima Plus® Flushometer is provided with an Override Button to allow a "courtesy flush" for individual user comfort.

#### ► Economical

Sloan installed batteries speed installation and provide years of metered flushing to control the use of water and energy. Batteries can be changed without turning off the water.

#### ► Compliance



This space for Architect/Engineer Approval

#### ► ELECTRICAL SPECIFICATIONS

##### Control Circuit

Solid State

SLOAN 10500 SEYMOUR AVE. • FRANKLIN PARK, • IL. 60131

Ph: 1-800-9-VALVE-9 or 1-847-671-4300 • Fax: 1-800-447-8329 or 1-847-671-4380 • <http://www.sloan.com>

CIA – Vineyard Lodge  
Wastewater Feasibility Study  
June 15, 2016  
Revised: September 2, 2016

**SUMMIT ENGINEERING, INC.**  
Project No. 2016040

Contact:  
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## Visual Impact Assessment

830 Pratt Avenue  
St Helena, CA

### 1. Introduction

The following aesthetic visual impact assessment has been prepared pursuant to the California Environmental Quality Act (CEQA). The purpose of this assessment is to identify any potentially adverse visual impacts that might result from the proposed demolition of a 15,000 sf building and the construction of three residential structures totaling 40,645 sf for the Culinary Institute of America (CIA) located at 830 Pratt Avenue, St Helena, California.

Several Federal Resource Agencies have developed methodologies for assessing visual impacts on the environment including the US Department of Agriculture Forest Service (USDA\_FS), US Department of the Interior Bureau of Land Management (USDI\_BLM), and The US Department of Transportation, Federal Highway Administration (USDOT-FHWA). However, no federal resource agency has addressed levels of impact intensity or significance of proposed impacts required by CEQA.

CEQA requires an evaluation of the potential to cause significant visual impacts to a project. However, CEQA does not specify criteria or specific standards to arrive at the significance of impacts. As a result, an evaluation of impacts on the visual and aesthetic qualities of a project by necessity builds upon CEQA Guidelines and the specific items addressed in Appendix G of the CEQA environmental checklist. The methodology assigned by the BLM fits this project because agricultural land qualities and wide long views predominate. This approach includes:

- Project description and visual Setting
- Identification of sensitive view points
- Analyzing existing visual quality and character of identified views
- Assessing the project's impact to those views compared to existing visual quality and character, and
- Proposed methods to mitigate any potentially significant visual impacts

### 2. Project Description & Visual Setting

#### Project Description

**Location:** Located east of State Highway 29 (Hwy 29) in Napa County within the incorporated limits of St Helena, California the property at 830 Pratt Avenue is a triangular shaped site. The east west street is a relatively flat area of the Napa Valley "floor" with visual access to the site's existing landscape. The project site is immediately bounded by Vineyard Road to the east, Pratt Avenue to the south, and an existing railroad right-of-way to the west (Figure 1).

**Existing Conditions:** Current building features within the project site can be described in three distinct areas. The southerly one-third of the site fronting on Pratt Avenue contains Vineyard Lodge I, a 15,050 sf single story residential structure with the remaining land area is surface parking. The second one-third contains a two story 12,848 sf residential building identified as Vineyard Lodge II. The most northerly one-third of the site is currently unimproved and vacant.

**Proposed Project:** The Culinary Institute of America (CIA) proposes to remove Vineyard Lodge I, and construct three (3) residential structures clustered around a central courtyard. The additional 40,645 sf, located within the most southerly one-third of the property will add 164 beds in buildings varying in height from 29'-0" to 40'-2". The following table illustrates specific information for each structure within the grouping:

|                   | <i>Building Description</i>                | <i>Bldg Height</i>                                          | <i>Setback from Street</i>                                                                 |
|-------------------|--------------------------------------------|-------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| Vineyard Lodge II | Existing Bldg.                             | 32'-0"                                                      |                                                                                            |
| Building A        | Two (2) stories<br>Three (3) story at rear | 29'-2" (along Vineyard Road)<br>40'-2" (at 3 story portion) | 20'-0" from Pratt Ave Property Line<br>50' from Centerline of Pratt Ave Right-of-way       |
| Building B        | Two (2) stories<br>Rectangular plan        | 29'-2"                                                      | 20'-0" from Pratt Ave Property Line<br>50'-0" from Centerline of Pratt Ave Right-of-way    |
| Building C        | Three (3) stories<br>Rectangular in plan   | 40'-2"                                                      | 145'-0" from Pratt Ave Property Line<br>175' -0" from Centerline of Pratt Ave Right-of-way |

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### 3. Methodology

*Documents Identified & Field Inspection:* Visual Impacts were identified by evaluating plan drawings and landscape plans taking into account the existing project setting, and analyzing visual simulations of project features at key viewpoints. Interpretation of existing visual character and surrounding land use was based on field visits conducted in July 2016. Research of the regulatory setting for the project was undertaken, including review of city planning documents and policies.

*Visual Changes & Impacts Defined:* Aesthetics and urban design are subjective fields, and visual changes that are favored or accepted by one may not be acceptable by another. The effects of visual changes are open to interpretation. Generally, a visual change is considered adverse if the project introduces obtrusive elements substantially out of character with the existing land use or substantially obscures a scenic view or vista available to sensitive receptors. In addition, visual change is considered adverse if it would damage scenic resources like trees, historic buildings, or other features of the visual environment that contribute to the scenic public setting. This visual analysis characterizes the visual setting and identifies important visual features and resources, in addition to scenic vistas experienced from within. View groups are identified, including sensitive view groups, in order to understand the potential visual changes that could be experienced with implementation of a proposed project.

Further, St Helena's General Plan cites as a community goal the nomination of Hwy 29 as a California Scenic Highway. This assessment will take into account the potential to effect visual quality and character of eligible scenic resources, any identified historic resources, as well as from viewpoints that are likely to represent the experience of highly sensitive view groups.

### 4. Regulatory Setting

*State Standards:* Appendix G of the California Environmental Quality Act Guidelines contains a checklist of environmental effects that may be considered significant. Under the category of "Aesthetics," a project may be considered to have a significant visual impact on the environment if it will:

- A. Have a substantial adverse effect on a scenic vista;
- B. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- C. Substantially degrade the existing visual character or quality of the site and its surroundings;
- D. Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.

The CEQA checklist questions are incorporated with other evaluation methods suited to the environment to determine the potential significance of the impacts generated by the proposed project.

*Local Standards:* At the local level, the City of St Helena has established policies regarding protection of views. Within the current St Helena General Plan, The Residential Neighborhoods topic within the Land Use and Growth Management chapter, and The Gateway, Edges and Views topic of the Community Design chapter identify protection and enhancement policies affecting view protection.

*Visual Quality Rating:* The before and after "visual quality" of viewpoints can be numerically rated according to the presence of seven key landscape components: landform, vegetation, water, color, adjacent scenery, scarcity, and cultural modifications.<sup>1</sup> By comparing the difference in visual quality from the baseline to post project visual conditions, the severity of project related visual impacts could be quantified. However, in some cases, visual changes caused by projects may actually have a beneficial visual effect, which enhances scenic quality. The table below illustrates the visual quality rating system for viewpoints.

While most components of the visual landscape can be objectively rated by this system, the rating of cultural or manmade modifications can be a potentially subjective element. Therefore, it is important to assess project

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<sup>1</sup> Rating scale based on the Bureau of Land Management's (BLM) "Scenic Quality Rating Criteria"



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effects relative to the “visual character” of the project setting. Visual character is qualitatively defined by eight important descriptive character components: form, line, color, texture, dominance, scale, diversity, and continuity.

### VISUAL QUALITY RATING SYSTEM

| KEY FACTORS                   |                                                                                                                                                                                                                                                                                                 | RATING CRITERIA & SCORE                                                                                                                                                                                                       |                                                                                                                     |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| LANDFORM                      | High vertical relief as expressed in prominent cliffs, spires, or massive rock outcrops, or severe surface variation or highly eroded formations including major badlands or dune systems; or detail features dominant and exceptionally striking and intriguing such as glaciers.<br>SCORE = 5 | Steep canyons, mesas buttes, cinder cones and drumlins; or interesting erosional patterns or variety in size and shape of landforms; or detail features which are interesting though not dominant or exceptional<br>SCORE = 3 | Low rolling hills, foothills, or flat valley bottoms; or few or no interesting landscape features.<br><br>SCORE = 1 |
| VEGETATION                    | A variety of vegetative types as expressed in interesting forms, textures, and patterns<br>SCORE = 5                                                                                                                                                                                            | Some variety of vegetation, but only one or two major types.<br>SCORE = 3                                                                                                                                                     | Little or no variety or contrast in vegetation.<br>SCORE = 1                                                        |
| WATER                         | Clear and clean appearing, still, or cascading white water, any of which are a dominant factor in the landscape.<br>SCORE=5                                                                                                                                                                     | Flowing or still, but not dominant in the landscape.<br><br>SCORE=3                                                                                                                                                           | Absent, or present but not noticeable.<br><br>SCORE=1                                                               |
| COLOR                         | Rich color combinations, variety or vivid color; or pleasing contrasts in the soil, vegetation, water or snowfields.<br>SCORE=5                                                                                                                                                                 | Some intensity or variety in colors and contrast of the soil, rock, and vegetation, but not a dominant scenic element.<br>SCORE=3                                                                                             | Subtle color variation, contrast, or interest, generally mute tones.<br>SCORE=1                                     |
| INFLUENCE OF ADJACENT SCENERY | Adjacent scenery greatly enhances visual quality.<br><br>SCORE=5                                                                                                                                                                                                                                | Adjacent scenery moderately enhances overall visual quality.<br><br>SCORE=3                                                                                                                                                   | Adjacent scenery has little or no influence on the overall visual quality.<br>SCORE=1                               |
| SCARCITY                      | One of a kind; or unusually memorable, or very rare within region. Consistent chance for exceptional wildlife or wildflower viewing, etc.<br>SCORE=5                                                                                                                                            | Distinctive, though somewhat similar to others within the region.<br><br>SCORE=3                                                                                                                                              | Interesting within its setting but fairly common within the region.<br><br>SCORE=1                                  |
| CULTURAL MODIFICATIONS        | Modifications add favorably to visual variety while promoting visual harmony.<br><br>SCORE=2                                                                                                                                                                                                    | Modifications add little or no visual variety to the area, and introducing not discordant elements.<br><br>SCORE=0                                                                                                            | Modifications add variety but are very discordant and promote strong disharmony<br>SCORE=-4                         |
| TOTAL SCORE:                  |                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                               |                                                                                                                     |

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Projects that create a high level of contrast to the existing visual character of a project setting are more likely to generate adverse visual impacts due to the inherent visual compatibility. Conversely, projects that create a low level of contrast to the existing visual character are less likely to generate adverse visual impacts due to inherent visual compatibility. On this basis, project modifications are quantified and evaluated for impact assessment purposes.

The following designations are used to describe the level of project impacts:

- **Potentially Significant Impact:** Any impact that could potentially permanently lower the visual quality of an identified sensitive viewpoint, and for which no feasible or effective mitigation can be identified.
- **Less Than Significant Impact With Mitigation Incorporated:** Any impact that could potentially permanently lower the visual quality of an identified viewpoint, but can be minimized or screened with mitigation incorporated. Therefore, specific mitigation measures are provided to reduce the impact to a less-than-significant level.
- **Less Than Significant Impact:** Any visible impact that would not potentially lower the visual quality of an identified sensitive viewpoint. In visual impact analysis, a less than significant impact usually occurs when a project's visual modifications can be seen but do not dominate, contrast with, or strongly degrade a sensitive viewpoint.
- **No Impact:** The project would not have an impact from an identified sensitive viewpoint. In visual impact analysis, there is no impact if the project's potential visual modifications cannot be seen from an identified sensitive viewpoint.

*Visual Setting:* Located on the valley floor the project site is flanked by the Mayacamas Mountain Range on the western and northern sides the Vaca Mountains on the eastern side. Several smaller valleys exist within these two ranges. The floor of the main valley undulates to the north and gradually rises from sea level at the valley's southern end to 362 feet (110 m) above sea level at the northern end in Calistoga at the foot of Mount Saint Helena. The setting includes distant views of the Mayacamas and Vaca Mountain ranges with gradual undulating volcanic period landforms that create periodic interruptions in the view experience.

*Visual Character:* The project site is situated at the northern border of St Helena's urban limits where medium density housing development is bordered by agricultural land uses immediately to the north and east. Therefore, the visual character of the project area is comprised of both residential scale single-family residences (south and west) and agricultural uses including processing and storage (north, east, and west).

*Sensitive Viewpoints:* Based upon the CEQA Guidelines checklist and on land uses that are commonly seen by regulatory agencies as visually sensitive, for the purpose of this report potentially sensitive viewpoints would include scenic vistas, scenic highways, residential views, public parks, recreational areas, and / or important historic locations from which the project could potentially be visible.

A scenic vista is defined as an area that is designated, signed, and accessible to the public for the express purpose of viewing and sightseeing. This includes any such areas designate by a federal date, or local agency. A "Scenic Highway" is defined as any stretch of public roadway that is designated as a scenic corridor by a federal, state or local agency. While, not currently listed as a scenic highway, portions of Hwy 29 within the vicinity of the project site have been identified as eligible by the State of California. Further, the City of St Helena has identified submission of Hwy 29 for Scenic Highway status as a goal of its General Plan. As such, this assessment treats Hwy 29 as a scenic resource for assessment purposes (SV1).

Views from public parks, recreational trails, and/or important historic sites have high visual sensitivities. Each are considered sensitive viewpoints. Field inspection and document research identified Beringer Vineyards and the CIA Greystone Campus formerly Greystone Vineyard property are known historic resources within proximity of the proposed project site. No locations were identified where the project site is visible from the Beringer property and therefore removed from consideration. Only Greystone possesses high visual sensitivity. As such, this viewpoint is identified as SV2 and potential impacts to this viewpoint are assessed.

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*View Groups:* Viewers of project features can be categorized in the following view groups:

- Pedestrians – Pedestrians walking to and from within the project area, or other streets that offer view of the project area.
- Cyclists – cyclists riding to and from along Pratt Avenue and Vineyard Road within the right-of-way adjacent to the project.
- Motorists – automobile and truck drivers and passengers traveling past the project area.
- Residents – residents who live along Pratt Avenue in view of the project area.
- Tourists – visitors/tourists who have traveled along Pratt Avenue with the intention of experiencing the visual resources of the area and wineries to the east.

Pedestrians, Cyclists, and Motorists groups tend to have a more dynamic and a less prolonged view of landscape features elements. Of the five (5) view groups, neighboring residential viewers have a higher visual sensitivity resulting from extended viewing periods than other view groups. For this reason, residential views are typically considered sensitive. Views from public parks, recreational trails, and/or important historic sites have high visual sensitivities and considered sensitive viewpoints

The City of St Helena identified six (6) locations where it is likely the proposed project would have the potential to affect sensitive residential viewer group and other secondary view groups. The six viewpoints (VP1-VP6) are described and the proposed project impacts are analyzed in the following section.

## 5. Potential Project Impacts / Affected Environment

### *Summary of Visual Impacts*

#### **SV1 Viewpoint from Eligible Scenic Hwy 29 at Pratt Avenue toward Project Site:**

The proposed project site is located approximately 1,350 feet east of State Highway (Hwy) 29. Sparsely located mature landscaping and varying changes in terrain characterize the view from this viewpoint. From Hwy 29 the project site is identified by a group of mature trees including a camphor tree in the southwest corner of the property.

Viewed from this location, the pre-project scenic quality rating scores and the post-project scores noted in the SV1 Quality Rating Table indicate the proposed project does not measurably alter the viewer's perception. Therefore, the proposed project would not have an impact on the features viewed from this eligible scenic highway.

| SV1 Scenic Quality Rating |                          |                           |
|---------------------------|--------------------------|---------------------------|
| <i>Criteria</i>           | <i>Pre-Project Score</i> | <i>Post-Project Score</i> |
| Landform                  | 1                        | 1                         |
| Vegetation                | 1                        | 1                         |
| Water                     | 1                        | 1                         |
| Color                     | 1                        | 1                         |
| Adjacent Scenery          | 3                        | 3                         |
| Scarcity                  | 3                        | 3                         |
| Cultural Modifications    | 0                        | 0                         |
| <i>Total Score</i>        | <i>10</i>                | <i>10</i>                 |

Limited view of proposed project. Does not appear not to have an impact on visible resources from this viewpoint.

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**SV2 Viewpoint from Historic Resource (Hwy 29 at CIA Greystone) looking toward the project site:**

Views of the project site from viewpoints north of Pratt Avenue along Hwy 29 are characterized by an undulating valley floor landscape with clusters of planted mature trees near residential and commercial activities. The viewpoint from the north at the entrance to The Greystone campus of the Culinary Institute of America, across the valley toward the project site is interrupted by Beringer Vineyards production and storage facilities (Figure 2). The current Vineyard Lodge II and adjacent proposed project are located south and east of the Beringer facilities and are minimally visible from this viewpoint.

As illustrated by the SV2 Scenic Quality Rating, the baseline visual quality score for this viewpoint is rated at 10 points. The post-project visual quality score for the same viewpoint is also rated at 10 points. The reviewers found no discernable difference in the two views.

Given the distance from the project site, the character and nature of the existing land uses around the site and the project's visual changes are minimally different from what is presently seen. The scale of project features do not dominate the visual landscape nor do they impede views of the surrounding environment. Therefore, visual impacts from SV2 are less than significant.

Viewed from this location, the pre-project scenic quality rating scores and the post-project scores as noted in the SV2 Quality Rating Table indicate the proposed project does not measurably alter the viewer's perception of the environment and would not have an impact on the features viewed from this historic resource.

| SV2 Scenic Quality Rating |                          |                           |
|---------------------------|--------------------------|---------------------------|
| <i>Criteria</i>           | <i>Pre-Project Score</i> | <i>Post-Project Score</i> |
| Landform                  | 1                        | 1                         |
| Vegetation                | 1                        | 1                         |
| Water                     | 1                        | 1                         |
| Color                     | 1                        | 1                         |
| Adjacent Scenery          | 3                        | 3                         |
| Scarcity                  | 3                        | 3                         |
| Cultural Modifications    | 0                        | 0                         |
| <i>Total Score</i>        | <i>10</i>                | <i>10</i>                 |

**VP1 Viewpoint looking west from the center of Pratt Avenue and fifty feet from the eastern corner of the project site:**

The pre-project setting is characterized by a predominance of foreground trees bordering Pratt Avenue and Vineyard Road. From this viewpoint, the existing Vineyard I and II buildings are minor features located in the background behind perimeter landscaping. A narrow portion of the Mayacamas range is visible within the Pratt Avenue right-of-way and hills are viewed through the project site. Through a break in the property's perimeter trees and over existing Lodge I roof, the background hillside beyond Hwy 29 is visible.

The post-project view of the site as evidenced by the VP1 Scenic Quality Rating identifies an impact to this view as the result of replacing the surface parking area and existing interior trees with Buildings A & B at the Pratt Avenue and Vineyard Road corner of the property.

From this viewpoint, the post-project simulation include existing and proposed landscape improvements based on five (5) years of growth. The landscaped perimeter remains a prominent visual feature and acts to screen buildings A & B at Pratt Avenue and Vineyard Road. Retention of existing trees adjacent to the public right-of-way, and the addition of proposed new trees, which over time will further reduce the prominence of the buildings, the visual change is reduced to less than significant.

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VP1 Scenic Quality Rating

| <i>Criteria</i>        | <i>Pre-Project Score</i> | <i>Post-Project Score</i> |
|------------------------|--------------------------|---------------------------|
| Landform               | 1                        | 1                         |
| Vegetation             | 3                        | 3                         |
| Water                  | 1                        | 1                         |
| Color                  | 1                        | 1                         |
| Adjacent Scenery       | 3                        | 1                         |
| Scarcity               | 1                        | 1                         |
| Cultural Modifications | 0                        | 0                         |
| <i>Total Score</i>     | <i>10</i>                | <i>8</i>                  |

*Proposed project has an impact to this view. New landscape treatment reduces the impact to less than significant.*

**VP2 Viewpoint looking east from the center of Pratt Avenue and fifty feet from the western corner of the project site:**

The pre-project viewpoint illustrates the prominence of existing trees along Pratt Avenue and along the railroad right-of-way largely screen the one-story Vineyard Lodge I. Middle ground hills are visible east along the Pratt Avenue right-of-way. The Vaca Mountain ridgeline is visible beyond the thirty-two foot (32'-0") high Vineyard Lodge II to the north and east.

Portions of proposed project Buildings A & C replace Vineyard Lodge I. The introduction of new landscape trees at or near the railroad right-of-way reduces the visual impact of new construction. The introduction of new construction is a visual change. However, the siting, design, height, materials and color selection contribute to reduce perceived visual changes.

As the VP2 Scenic Quality Ratings indicate, pre-project and post-project scores are the same (10). The difference between the pre-project qualities and the post-project qualities do not measurably alter the viewer's perception of the environment and would not have an impact from this viewpoint.

VP2 Scenic Quality Rating

| <i>Criteria</i>        | <i>Pre-Project Score</i> | <i>Post-Project Score</i> |
|------------------------|--------------------------|---------------------------|
| Landform               | 1                        | 1                         |
| Vegetation             | 3                        | 3                         |
| Water                  | 1                        | 1                         |
| Color                  | 1                        | 1                         |
| Adjacent Scenery       | 3                        | 3                         |
| Scarcity               | 1                        | 1                         |
| Cultural Modifications | 0                        | 0                         |
| <i>Total Score</i>     | <i>10</i>                | <i>10</i>                 |

*The proposed project appears to have no impact on the environment from this viewpoint.*

**VP3 Viewpoint looking west from the center of Pratt Avenue and approximately 200 feet from the eastern corner of the project site:**

The pre-project foreground view is composed of vineyard plantings, trees along Vineyard Road that provide partial views of Vineyard Lodge I and II, and mountain range in the background within the Pratt Avenue right-of-way. The middle ground hillside is visible above the cultural modifications, Vineyard Lodge II.

The post-project simulation view indicates proposed buildings will be visible above the tree line located at the site's perimeter. The siting, design, and overall height of the proposed project are similar to the existing cultural modifications, Vineyard Lodge I and nearby residential properties south of Pratt Avenue. Although the comparison of pre- and post-project views confirms a visual change, the viewers' perception of the surrounding environment is not significantly different in the pre-and post-project views.

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As a result of the proposed landscape, the VP3 Scenic Quality Rating scores indicate the proposed project does not measurably alter the viewer's perception of the environment and would not have an impact on the features from this viewpoint.

| VP3 Scenic Quality Rating |                          |                           |
|---------------------------|--------------------------|---------------------------|
| <i>Criteria</i>           | <i>Pre-Project Score</i> | <i>Post-Project Score</i> |
| Landform                  | 1                        | 1                         |
| Vegetation                | 3                        | 3                         |
| Water                     | 1                        | 1                         |
| Color                     | 1                        | 1                         |
| Adjacent Scenery          | 3                        | 3                         |
| Scarcity                  | 1                        | 1                         |
| Cultural Modifications    | 0                        | 0                         |
| <i>Total Score</i>        | <i>10</i>                | <i>10</i>                 |

*The proposed project appears to have no impact from this viewpoint.*

**VP4 Viewpoint looking east from the center of Pratt Avenue and approximately 200 feet from the western corner of the project site:**

The pre-project view is composed of planted vineyard in the foreground screening all but the roof and chimneys of Vineyard Lodge I, and the roof of Vineyard Lodge II. Hills to the east-northeast form the visible middle ground throughout the view with a portion of the Vaca Mountains visible in the background.

The post-project view of the site as evidenced by the VP4 Scenic Quality Rating identifies an impact to this view as the result of replacing the single story Vineyard Lodge I with Buildings B & C (Cultural Modifications). The post-project simulation indicates the added landscape features have been located to reduce the presence of the proposed modifications. The design, materials and color selections further contribute to reducing the impact to visual quality.

From this viewpoint, the post-project simulation indicates the proposed landscape and trees reduce the prominence of the proposed cultural modifications to less than significant.

| VP4 Scenic Quality Rating |                          |                           |
|---------------------------|--------------------------|---------------------------|
| <i>Criteria</i>           | <i>Pre-Project Score</i> | <i>Post-Project Score</i> |
| Landform                  | 1                        | 1                         |
| Vegetation                | 3                        | 3                         |
| Water                     | 1                        | 1                         |
| Color                     | 1                        | 1                         |
| Adjacent Scenery          | 3                        | 3                         |
| Scarcity                  | 1                        | 1                         |
| Cultural Modifications    | 0                        | -4                        |
| <i>Total Score</i>        | <i>10</i>                | <i>6</i>                  |

*Proposed project has an impact to this view. New landscape treatment reduces the impact to less than significant.*

**VP5 Viewpoint looking north from the south side of Pratt Avenue aligning with driveway adjacent to railroad right-of-way:**

The pre-project view is dominated by mature trees adjacent to the Pratt Avenue right-of-way. Cultural modifications including utility poles, overhead utility lines, rail crossing arms and utility boxes are located in the foreground. The hillside as middle ground is a minor feature from this viewpoint. Similarly, the Vaca Mountains within the railroad right-of-way is a minor component in the background. Trees within the railroad right-of-way help define the western boundary of the project site.

Visual Impact Assessment  
830 Pratt Avenue  
St Helena, CA

Viewed from this location, the pre-project scenic quality rating scores and the post-project scores as noted in the VP5 Scenic Quality Rating indicate the proposed project does not measurably alter the viewer's perception of the environment and would not have an impact from this viewpoint.

| VP5 Scenic Quality Rating |                          |                           |
|---------------------------|--------------------------|---------------------------|
| <i>Criteria</i>           | <i>Pre-Project Score</i> | <i>Post-Project Score</i> |
| Landform                  | 1                        | 1                         |
| Vegetation                | 1                        | 1                         |
| Water                     | 1                        | 1                         |
| Color                     | 1                        | 1                         |
| Adjacent Scenery          | 1                        | 1                         |
| Scarcity                  | 1                        | 1                         |
| Cultural Modifications    | 0                        | 0                         |
| <i>Total Score</i>        | <i>6</i>                 | <i>6</i>                  |

*From VP5 the proposed project appears to have no impact from this viewpoint.*

**VP6 Viewpoint looking north from the south side of Pratt Avenue at the midpoint of the Pratt Avenue frontage of the project site:**

The pre-project view of the project site is located near the center of the Pratt Avenue property line, opposite one of the two entry / exits to the property's surface parking. Mature trees that line the property along Pratt Avenue are located to the east and west. Existing trees at the site's interior partially screen Vineyard Lodge I to the west and Vineyard Lodge II to the North. Minimally visible, the hillside forms the middle ground in this view. A small portion of the Mayacamas range is visible near the center of the viewpoint.

The post-project simulation illustrates Buildings A & B placed on the site set back 20'-0" from the property line. The buildings are screened by the insertion of trees and landscaping replacing existing driveways, which complete the row of trees along Pratt Avenue. The multi-building plan provides the project with a scale and character consistent with Vineyard Lodge II. The architectural features further articulate the structures to blend with the residential qualities of nearby properties along Pratt Avenue.

The cultural modifications score of the VP6 Scenic Quality Rating indicates a reduction in scenic quality. The proposed project provides for increasing the amount of landscaping within the setback along Pratt Avenue to mitigate the reduced visual quality residential and other view groups may experience. Further, the building design, materials and color selections were devised to reduce Building A & C's scale to a residential character and blend into the surrounding land features.

With retention of existing trees adjacent to the public right-of-way and the addition of proposed new trees, which at maturity will further reduce the prominence of the buildings, the visual change is reduced to less than significant.

| VP6 Scenic Quality Rating |                          |                           |
|---------------------------|--------------------------|---------------------------|
| <i>Criteria</i>           | <i>Pre-Project Score</i> | <i>Post-Project Score</i> |
| Landform                  | 1                        | 1                         |
| Vegetation                | 1                        | 1                         |
| Water                     | 1                        | 1                         |
| Color                     | 3                        | 3                         |
| Adjacent Scenery          | 3                        | 1                         |
| Scarcity                  | 1                        | 1                         |
| Cultural Modifications    | 0                        | 0                         |
| <i>Total Score</i>        | <i>10</i>                | <i>8</i>                  |



Visual Impact Assessment  
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## 6. Conclusions

This assessment identified eight sensitive viewpoints. Two long distant viewpoints (SV1 and SV2) that assessed potential impacts from Hwy 29 at Pratt Avenue, an eligible scenic highway, and the CIA at Greystone, a historic resource with a view of the project site. Six viewpoints (VP1-VP6) were selected to study the project form locations that may be seen by nearby residential viewers.

The distant viewpoint (SV1) at Highway 29 and Pratt Avenue, as well as the view from the CIA at Greystone (SV2) resulted in no visual impact in these highly sensitive locations.

Three of the six viewpoints (VP2, VP3, and VP5) were found to have no impact on visual quality. The three remaining, (VP1, VP4, and VP6) were found to have a less than significant impact on visual quality of the surrounding environment. The result of the foregoing analysis indicates the project from both the distant locations (SV1 and SV2) and nearby residential viewpoints (VP1 – VP6) would have a less than significant impact.

## 7. References

Caltrans California Scenic Highway Program Website: [www.dot.ca.gov/hq/landarch/scpr/htm](http://www.dot.ca.gov/hq/landarch/scpr/htm)

St Helena General Plan Update:

[http://cityofsthenana.org/sites/default/files/General%20Plan%20Update%20090815.Reduced%20File%20Size\\_0.pdf](http://cityofsthenana.org/sites/default/files/General%20Plan%20Update%20090815.Reduced%20File%20Size_0.pdf)

United States Department of Transportation , Federal highway Administration, Office of Environmental Policy, "Visual Assessment for Highway Projects", Publication No FHWA-HI-88-054 (1983).

United States Department of the Interior, Bureau of Land Management, "Visual Resource Management Manual, Section 8400 (1980)

Visual Impact Assessment  
830 Pratt Avenue  
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Appendix A

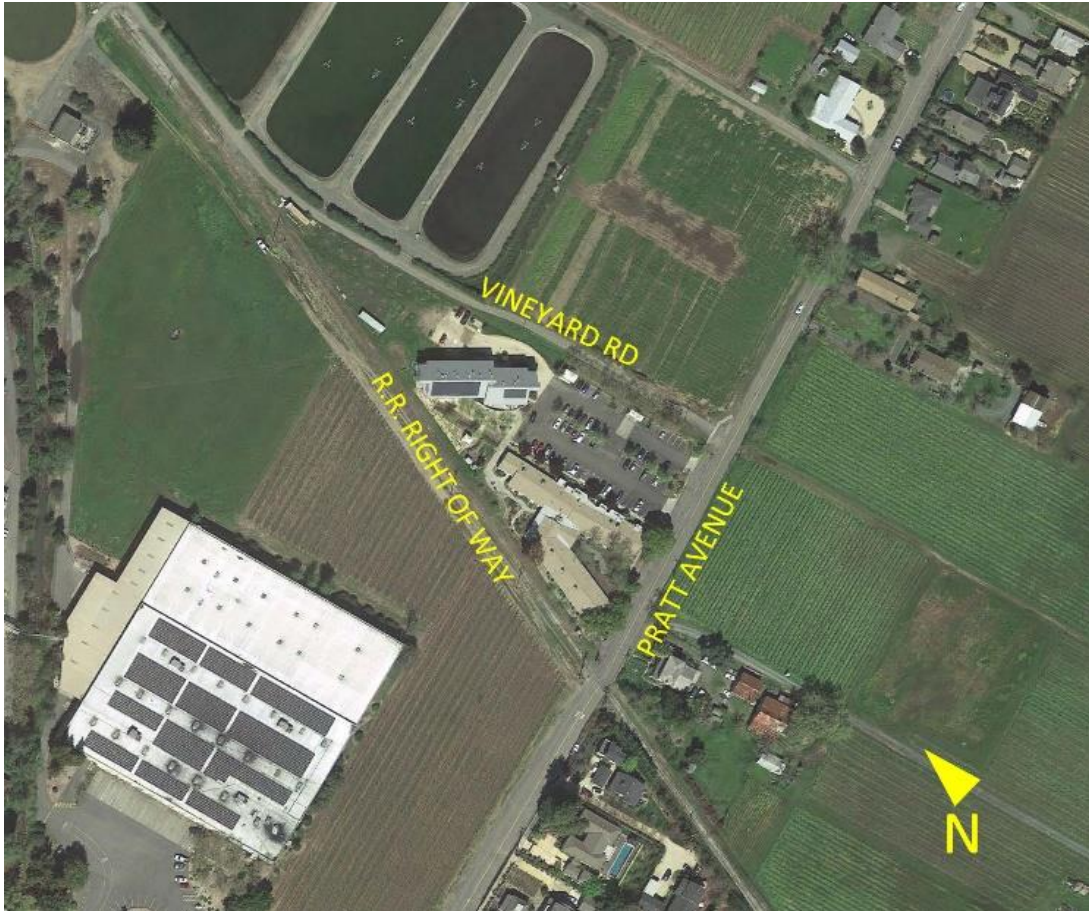


Figure 1: Aerial of Site (NTS)

Visual Impact Assessment  
830 Pratt Avenue  
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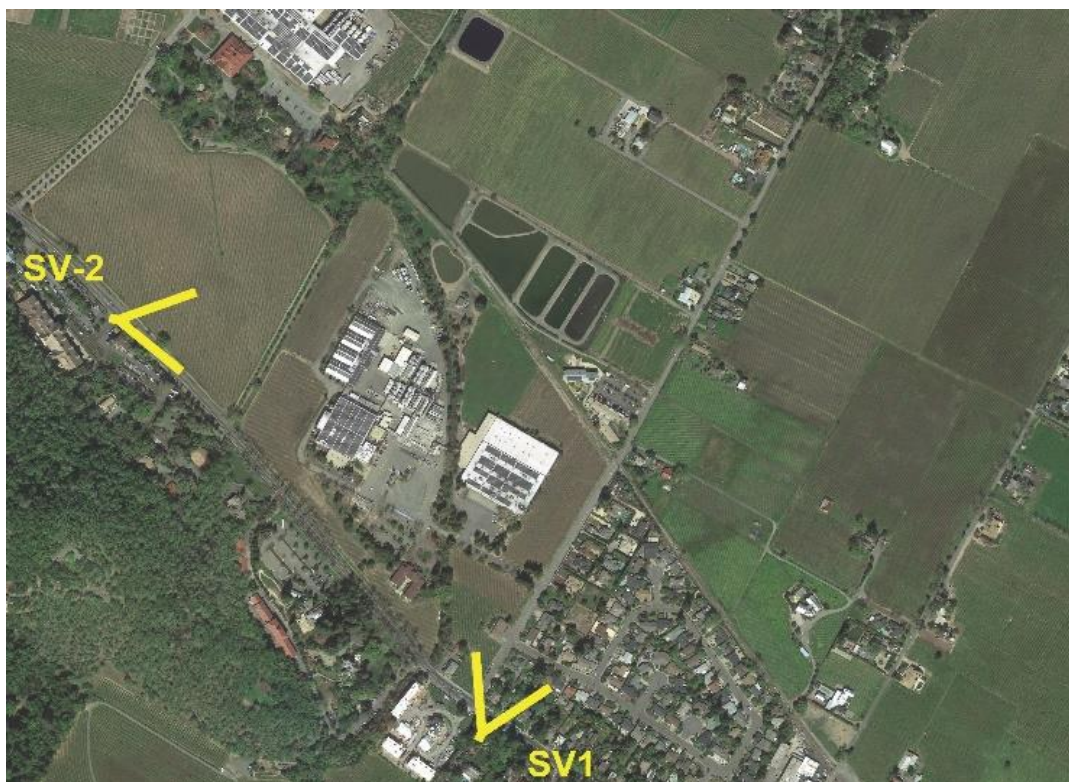


Figure 2: Locations of Scenic Views from Potential Resources. SV1 taken at Hwy 29 at Pratt Avenue and SV2 taken at Hwy 29 at CIA at Greystone.



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Figure 3: Locations of Viewpoints (VP1-VP6)

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Figure 4 SV1 View from Hwy 29 along Pratt Avenue toward proposed project site.

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Figure 5: View taken from CIA\_Greystone over Hwy 29 looking southeast to project site located behind Beringer production and warehouse facilities.







## CULINARY INSTITUTE OF AMERICA NAPA VALLEY

VIEW 1: BEFORE  
AUGUST 15, 2016

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# CULINARY INSTITUTE OF AMERICA NAPA VALLEY

VIEW 1: AFTER  
AUGUST 15, 2016







## CULINARY INSTITUTE OF AMERICA NAPA VALLEY

VIEW 2: BEFORE  
AUGUST 15, 2016

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## CULINARY INSTITUTE OF AMERICA NAPA VALLEY

VIEW 2: AFTER  
AUGUST 15, 2016

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# CULINARY INSTITUTE OF AMERICA NAPA VALLEY

VIEW 3: BEFORE  
AUGUST 15, 2016







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VIEW 3: AFTER  
AUGUST 15, 2016

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VIEW 4: BEFORE  
AUGUST 15, 2016







## CULINARY INSTITUTE OF AMERICA NAPA VALLEY

VIEW 4: AFTER  
AUGUST 15, 2016

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## CULINARY INSTITUTE OF AMERICA NAPA VALLEY

VIEW 5: BEFORE  
AUGUST 15, 2016

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VIEW 5: AFTER  
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## CULINARY INSTITUTE OF AMERICA NAPA VALLEY

VIEW 6A: BEFORE  
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VIEW 6A: AFTER  
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## CULINARY INSTITUTE OF AMERICA NAPA VALLEY

VIEW 6: BEFORE  
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## CULINARY INSTITUTE OF AMERICA NAPA VALLEY

VIEW 6: AFTER  
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## WATER AVAILABILITY ANALYSIS

### Culinary Institute of America – Greystone & Vineyard Lodge

2555 Main Street, St. Helena,  
California (APN 009-131-003)

830 Pratt Avenue, St. Helena,  
California (APN 009-010-024)



CIVIL STRUCTURAL ELECTRICAL WATER|WASTEWATER

Project No. 2016039 & 2016040

June 14, 2016

Revised: September 2, 2016

**CIA GREYSTONE & VINEYARD LODGE USE PERMIT ASSISTANCE**

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**SUMMIT ENGINEERING, INC.**

Water Availability Analysis

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| WATER USE AGREEMENT..... | 3 |
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| PROPOSED WATER USE.....  | 5 |
| CONCLUSION.....          | 8 |

**LIST OF ENCLOSURES**

- Enclosure A:      Water Demand Estimates
- Enclosure B:      Manufacturer's Specification Sheets for Fixtures
- Enclosure C:      Vineyard Lodge Landscape Irrigation Calculations

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Water Availability Analysis

**CIA GREYSTONE & VINEYARD LODGE  
WATER AVAILABILITY ANALYSIS**

**PROJECT DESCRIPTION**

The Culinary Institute of America (CIA) consists of a Greystone campus, located at 2555 Main Street, St. Helena, and a Vineyard Lodge campus, located at 830 Pratt Avenue, St Helena. The Greystone campus currently has an enrollment of 200 students and provides housing for 101 students in dormitories at Vineyard Lodge and up to 38 students at Greystone. CIA is proposing a Use Permit amendment to expand enrollment to 300 students and to add dormitories for 123 students and 1 education staff at the Vineyard Lodge campus. CIA also plans to relocate some activities to the Copia Building in Napa to reduce employees and students at the Greystone and Vineyard Lodge campuses. The Vineyard Lodge will upgrade the current student lodges to provide a maximum occupancy of 224 residents.

The Wine Spectator Greystone Restaurant (WSGR), at Greystone, currently operates 362 days a year with 190 seats for lunch and dinner service. This restaurant will be closed and the Flavor Discovery Center (FDC) will take the place of the WSGR. The FDC will serve meals only 180 days per year with an average of 58 guests per day; therefore, reducing overall annual water use at the Greystone campus.

**WATER USE AGREEMENT**

The CIA Vineyard Lodge and Greystone properties currently operate under an amended water use agreement (Resolution No. 2008-77) in which 1,600 gpd of water allotment was transferred from the Greystone property to the Vineyard Lodge property to meet the water demand of a new dormitory building. The resulting current City water allotments for the 2 properties are as follows:

|                         |                                                                         |
|-------------------------|-------------------------------------------------------------------------|
| CIA Greystone:          | 15,900 gpd (average day)<br>17.8 ac-ft/year                             |
| CIA Vineyard Lodge:     | 4,750 gpd (average day)<br>5.2 ac-ft/year                               |
| <b>Total Allotment:</b> | <b><u>20,650 gpd (average day)</u></b><br><b><u>23.1 ac-ft/year</u></b> |

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The onsite well at Greystone is currently used for landscape irrigation only, and the well will continue to be used only for landscape irrigation in accordance with the City of St. Helena Municipal Code.

**EXISTING WATER USE**

The existing water demand estimates for the Greystone and Vineyard Lodge campuses are presented in Table 1. The restaurant, café, campus store, and general hospitality at Greystone are closed during the holidays. The Vineyard Lodge is closed to students during the 8 weeks of vacation (spring and summer breaks, Thanksgiving, Christmas and holidays). During these 8 weeks of breaks, 50% of the instructors and education staff are present during 5 weeks, and no instructors or education staff are present for 3 weeks.

Data records from 2014 and 2015 show that the average water use at Greystone during this period was 17,105 gal/day with an annual water use of 18.78 ac-ft, which is above the current allotment. As described in the following pages, the reduction in students and per capita use, accompanied by an increase in water efficiency measures from new dishwashers and appliances, and a leak detection program, will substantially decrease the overall water use at the Greystone site. Leaks have been identified at the site as a major source of water inefficiency and cause for allotment exceedances, and these will be repaired as part of the facility upgrades. Existing landscape irrigation demands are provided by an onsite well at Greystone.

Based on a review of water use and occupancy data at the Vineyard Lodge from 2014 and 2015, the estimated per capita water use is 63 gpd per resident. This number is derived from actual flow data, and includes water used for landscaping which is not metered separately. The estimated existing water use for Vineyard Lodge is approximately 6,373 gpd on average, or 6.03 ac-ft/year, which is above the current water allotment.

Table 1. Estimated Existing Water Use at Greystone &amp; Vineyard Lodge

| Type of Water Use      | Existing Count | Water Demand (gpd) | Water Use (gpcd) | Annual Use (days/year) | Annual Demand (ac-ft./year) |
|------------------------|----------------|--------------------|------------------|------------------------|-----------------------------|
| <u>Greystone</u>       |                | 17,105             |                  | 365                    | 18.78                       |
| <u>Vineyard Lodge:</u> |                |                    |                  |                        |                             |
| Students (bed count)   | 100            | 6,310              | 63               | 308                    | 5.96                        |
| Education Staff        | 1              | 63                 | 63               | 326                    | 0.06                        |
| <b>TOTAL</b>           |                | <b>23,478</b>      |                  |                        | <b>24.81</b>                |

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**PROPOSED WATER USE****Greystone Campus**

The proposed water uses for the Greystone and Vineyard Lodge campuses are presented in the following tables. The WSGR restaurant will be closed and the FDC will only be open 180 days a year. The FDC restaurant will utilize water efficient appliances, further contributing to the reduction in water demand for this site. The café, campus store, and hospitality will remain closed during the holidays. Only 50% of the instructors and education staff will remain present during 5 of the 8 weeks. Please see Enclosure A for detailed water use estimates.

Table 2. Estimated Proposed Water Use at Greystone

| <b>Type of Water Use</b>               | <b>Proposed Count</b> | <b>Water Use (gpcd)</b> | <b>Peak Water Demand (gpd)</b> | <b>Annual Use (days/year)</b> | <b>Annual Demand (ac-ft./year)</b> |
|----------------------------------------|-----------------------|-------------------------|--------------------------------|-------------------------------|------------------------------------|
| <b><u>Administration:</u></b>          |                       |                         |                                |                               |                                    |
| Employees                              | 6                     | 15                      | 90                             | 355                           | 0.10                               |
| Operations Staff                       | 22                    | 15                      | 330                            | 355                           | 0.36                               |
| <b><u>Restaurant:</u></b>              |                       |                         |                                |                               |                                    |
| Employees                              | 3                     | 15                      | 45                             | 355                           | 0.05                               |
| Restaurant Guests                      | 0                     | 15                      | 0                              | 355                           | 0.00                               |
| <b><u>Flavor Discovery Center:</u></b> |                       |                         |                                |                               |                                    |
| Student Staff                          | 0                     | 15                      | 0                              | 180                           | 0.00                               |
| Restaurant Guests                      | 58                    | 15                      | 870                            | 180                           | 0.48                               |
| <b><u>Café:</u></b>                    |                       |                         |                                |                               |                                    |
| Employees                              | 7                     | 15                      | 105                            | 355                           | 0.11                               |
| Café Guests                            | 42                    | 6                       | 252                            | 355                           | 0.27                               |
| <b><u>Campus Store:</u></b>            |                       |                         |                                |                               |                                    |
| Employees                              | 6                     | 20                      | 120                            | 355                           | 0.13                               |
| Store Guests                           | 20                    | 3                       | 60                             | 355                           | 0.07                               |
| <b><u>Education:</u></b>               |                       |                         |                                |                               |                                    |
| Students                               | 300                   | 23                      | 6,900                          | 308                           | 6.52                               |
| Instructors                            | 25                    | 15                      | 375                            | 326                           | 0.37                               |
| Education Staff                        | 18                    | 15                      | 270                            | 326                           | 0.27                               |
| Student Lodging                        | 38                    | 60*                     | 2,280                          | 326                           | 2.28                               |
| <b><u>Hospitality:</u></b>             |                       |                         |                                |                               |                                    |
| Employees                              | 2                     | 15                      | 30                             | 355                           | 0.03                               |
| Visitors & Guests                      | 25                    | 3                       | 75                             | 355                           | 0.08                               |
| <b><u>Food Enthusiasts:</u></b>        |                       |                         |                                |                               |                                    |
| Education Staff                        | 3                     | 15                      | 45                             | 355                           | 0.05                               |
| Education Guests                       | 20                    | 15                      | 300                            | 355                           | 0.33                               |
| <b>TOTAL</b>                           | <b>557</b>            |                         | <b>12,147</b>                  |                               | <b>11.51</b>                       |

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\* The Environmental Protection Agency's Onsite Wastewater Treatment Systems manual recommends a daily flow rate of 25-60 gpcd for boarding houses

The projected water use for Greystone is approximately 12,147 gal/day peak flow, but when factoring in the annual use, the average daily flow becomes 10,276 gal/day, corresponding to 11.51 ac-ft/year. This estimate is below the current water allotment and less than the existing estimated water use for the site.

**Vineyard Lodge**

Students will spend a large portion of their day outside of the dormitories, so a value less than the typical daily per capita water use estimate is used to calculate proposed water use. Based on billing data, the average daily water use for the Pratt Avenue site from May 2014 through May 2015 was 6,373 gpd based on billing records, with a total occupancy of 101 residents, resulting in an average water demand of approximately 63 gallons per capita per day (gpcd). A flow rate of 65 gpcd is therefore used to be conservative to calculate the water demand for the existing dormitory building that will remain. The vineyard lodge will remain closed to students during the 8 weeks of vacation and closed to instructors and staff for 3 weeks of that vacation period.

For the proposed dormitory buildings, the City of St. Helena Water Neutral Policy for Development provides a method for estimating proposed water demand based on fixture flow rates and use assumptions. The following calculations show that the estimated residential water demand for the proposed buildings should be approximately 35 gpcd due to new water efficient fixtures and appliances, and new plumbing infrastructure.

Table 3. Proposed Dormitory Buildings – Water Demand

| <b>Fixture</b>                               | <b>Flow Rate</b> |      |           | <b>Flow Duration</b> |      |                      | <b>Occupants</b> |     |           | <b>Water Use</b> |                      |
|----------------------------------------------|------------------|------|-----------|----------------------|------|----------------------|------------------|-----|-----------|------------------|----------------------|
| Toilet                                       | x                | 1.3  | gal/flush | x                    | 3    | flushes/day/occupant | x                | 164 | occupants | =                | 640 gal/day          |
| Showerhead                                   | x                | 1.5  | gal/min   | x                    | 8    | min/day/occupant     | x                | 164 | occupants | =                | 1,968 gal/day        |
| Sink Faucet                                  | x                | 0.5  | gal/min   | x                    | 0.75 | min/day/occupant     | x                | 164 | occupants | =                | 62 gal/day           |
| Kitchen Faucet                               | x                | 1.5  | gal/min   | x                    | 4    | min/day/occupant     | x                | 164 | occupants | =                | 984 gal/day          |
| Kitchen Faucet (Dishwashing)                 | x                | 1.5  | gal/min   | x                    | 1.27 | min/day/occupant     | x                | 164 | occupants | =                | 309 gal/day          |
| Clothes Washer                               | x                | 19.7 | gal/load  | x                    | 0.37 | load/day/occupant    | x                | 164 | occupants | =                | 1,195 gal/day        |
| <b>Proposed Building Design Water Demand</b> |                  |      |           |                      |      |                      |                  |     |           | <b>=</b>         | <b>5,517 gal/day</b> |
| <b>Average Use per Occupant</b>              |                  |      |           |                      |      |                      |                  |     |           | <b>=</b>         | <b>31.5 gal/day</b>  |

No dishwashers will be installed in the kitchen/common areas. To account for the additional demand required to hand wash dishes, an additional kitchen faucet source was included, equivalent to three times the anticipated dishwasher water demand anticipated in the City of St. Helena Water Neutral

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Policy guidelines. The estimated dishwasher rate is based on 6.3 gal/load, 0.1 load/day/occupant, and 164 occupants, for a total of approximately 103 gallons per day. Therefore 309 gpd was added to the kitchen faucet use, or 1.265 min/occupant/day in addition to the typical 4 min/day/occupant assumed in the Water Neutral Policy. This should adequately account for the amount of additional water used per occupant at the kitchen faucet for dishwashing purposes.

Manufacturer's specification sheets for the included fixtures are included in Enclosure B. The 164 occupants total within the three new buildings should require approximately 5,128 gal/day of domestic water in total, which equates to 31.5 gpcd. For design purposes, an estimated 35 gpcd was used for per capita water demand. Combining the estimated water demand for the existing and proposed buildings, and summing over an annual basis provides the total proposed domestic water use for the Vineyard Lodge.

Table 4. Estimated Proposed Water Use at Vineyard Lodge

| Type of Water Use                   | Proposed Count | Water Use (gpcd) | Water Demand (gpd) | Annual Use (days/year) | Annual Demand (ac-ft./year) |
|-------------------------------------|----------------|------------------|--------------------|------------------------|-----------------------------|
| <u>Existing Dormitory Building:</u> |                |                  |                    |                        |                             |
| Students (bed count)                | 59             | 63 <sup>a</sup>  | 3,717              | 308                    | 3.51                        |
| Education Staff                     | 1              | 63               | 63                 | 326                    | 0.06                        |
| <u>Proposed Dormitory Building:</u> |                |                  |                    |                        |                             |
| Students                            | 164            | 35 <sup>b</sup>  | 5,740              | 308                    | 5.43                        |
| <b>TOTAL</b>                        | <b>224</b>     |                  | <b>9,520</b>       |                        | <b>9.00</b>                 |

<sup>a</sup> Based on a review of water use and occupancy data at the Vineyard Lodge from 2014 and 2015, the estimated per capita water use is 63 gpd per resident.

<sup>b</sup> Based on the fixture parameters and flow described above and included in Table 3.

The estimated proposed water use for Vineyard Lodge is approximately 9,605 gal/day peak flow (8.98 ac-ft/year), which is above the current water allotment. It is proposed that the existing water allotment be revised to redistribute excess allotment from Greystone to Vineyard Lodge to account for the increase in demand from the new dormitory buildings.



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**LANDSCAPE IRRIGATION WATER USE – VINEYARD LODGE**

A landscape area of approximately 32,905 sf is proposed as part of the Vineyard Lodge improvements. The landscaping will consist of 100% low water use xeriscape, and will require approximately 0.73 ac-ft of water per year, or 650 gallons of water per day. This estimate is based on the Water Efficient Landscape Worksheet for the City of St. Helena provided by the project landscape architect. Please refer to the landscape plans and calculations for details.

**CONCLUSION**

Based on the proposed changes to student and employee numbers and session scheduling at Greystone, and the new dormitory buildings at Vineyard Lodge, the combined annual water demand for both sites should be within the existing combined water allotment of 23.1 ac-ft./year. A comparison of the baseline existing and proposed demand, as well as the initial allocation of annual water supply for operational purposes is included in Table 5. Within this table, the demand estimates in gallons per day represent peak demand, and the acre-ft/year values represent annual operations at less than 365 days/year as described previously in this report.

In order to meet the specific needs of each site, CIA proposes to combine the allotments for each property into one water agreement so that water can be used between the two properties as required, while staying under the total existing water allotment of 23.1 ac-ft./year. Approval from the City Council of St. Helena will be sought in order to restructure the water allocation agreement into a shared agreement for the two facilities. Should a shared water agreement not be possible, CIA is proposing an equal redistribution.

Table 5. Proposed Water Allotment for CIA

| Site               | Existing Allotment | Baseline Existing Demand* |              | Proposed Demand |              | Proposed Redistribution |             |
|--------------------|--------------------|---------------------------|--------------|-----------------|--------------|-------------------------|-------------|
|                    | (gpd)              | (gpd)                     | (ac-ft/year) | (gpd)           | (ac-ft/year) | (gpd)                   | (ac-ft./yr) |
| CIA Greystone      | 15,900             | 17,105                    | 18.78        | 10,276          | 11.51        | 10,325                  | 11.56       |
| CIA Vineyard Lodge | 4,750              | 6,373                     | 6.91         | 9,520           | 10.36        | 10,325                  | 11.56       |
| <b>TOTAL</b>       | <b>20,650</b>      | <b>23,478</b>             | <b>25.69</b> | <b>19,796</b>   | <b>22.17</b> | <b>20,650</b>           | <b>23.1</b> |

\* Based on flow meter data

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Although the measured baseline existing use is above the current water allotment, because of the changes to the facility's programming and more efficient fixtures, the proposed demand is less than the total water allotment for both properties. CIA proposes the retrofits as well as a reduction in the number of students and restaurant guests described above at the Greystone facility, to offset the increased water use proposed for the Pratt Avenue site. These retrofits and reductions are proposed in accordance with the City of St. Helena Water Neutral Policy for Development (off-site retrofits), and should provide a substantial reduction from the measured existing water demand. Therefore, the zero net water increase between these properties as required by the Water Neutral policy will be met.

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**ENCLOSURE A  
WATER USE DATA**

Vineyard Lodge Water Use Data  
2014 - 2015

| Billing Period |            | Days in Billing Period | Total Gal | Ave GPD |
|----------------|------------|------------------------|-----------|---------|
| 5/16/2014      | 6/15/2014  | 30                     | 166,056   | 5,535   |
| 6/16/2014      | 7/15/2014  | 29                     | 169,048   | 5,829   |
| 7/16/2014      | 8/15/2014  | 30                     | 259,556   | 8,652   |
| 8/16/2014      | 9/15/2014  | 30                     | 195,976   | 6,533   |
| 9/16/2014      | 10/15/2014 | 29                     | 306,680   | 10,575  |
| 10/16/2014     | 11/15/2014 | 30                     | 306,678   | 10,223  |
| 11/16/2014     | 12/15/2014 | 29                     | 160,072   | 5,520   |
| 12/16/2014     | 1/15/2015  | 30                     | 75,548    | 2,518   |
| 1/16/2015      | 2/15/2015  | 30                     | 174,284   | 5,809   |
| 2/16/2015      | 3/15/2015  | 27                     | 162,316   | 6,012   |
| 3/16/2015      | 4/15/2015  | 30                     | 171,292   | 5,710   |
| 4/16/2015      | 5/15/2015  | 29                     | 103,224   | 3,559   |
| Summary        |            | Max                    | 306,680   | 10,575  |
|                |            | Average                | 187,561   | 6,373   |
|                |            | Median                 | 170,170   | 5,819   |

Greystone Water Use Data  
2014 - 2015

| Billing Period |            | Days in Billing Period     | Total Gal | Ave GPD |
|----------------|------------|----------------------------|-----------|---------|
| 6/16/2014      | 7/15/2014  | 29                         | 528,836   | 18,236  |
| 7/16/2014      | 8/15/2014  | 30                         | 464,508   | 15,484  |
| 8/16/2014      | 9/15/2014  | 30                         | 437,580   | 14,586  |
| 9/14/2015      | 10/14/2015 | Billing Data Not Available |           |         |
| 10/16/2014     | 11/15/2014 | 30                         | 587,180   | 19,573  |
| 11/16/2014     | 12/15/2014 | 29                         | 528,088   | 18,210  |
| 12/16/2014     | 1/15/2015  | 30                         | 382,228   | 12,741  |
| 1/16/2015      | 2/15/2015  | 30                         | 526,592   | 17,553  |
| 2/16/2015      | 3/15/2015  | 27                         | 529,584   | 19,614  |
| 3/16/2015      | 4/15/2015  | 30                         | 571,472   | 19,049  |
| 4/16/2015      | 5/15/2015  | 29                         | 462,264   | 15,940  |
| 5/16/2015      | 6/15/2015  | 30                         | 462,264   | 15,409  |
| 6/16/2015      | 7/15/2015  | 29                         | 507,892   | 17,514  |
| 7/16/2015      | 8/15/2015  | 30                         | 454,784   | 15,159  |
| 8/16/2015      | 9/15/2015  | 30                         | 604,384   | 20,146  |
| 9/16/2015      | 10/15/2015 | 29                         | 503,404   | 17,359  |
| Summary        |            | Max                        | 604,384   | 20,146  |
|                |            | Average                    | 503,404   | 17,105  |
|                |            | Median                     | 507,892   | 17,514  |

|          |         |        |
|----------|---------|--------|
| 2015 Max | 604,384 | 20,146 |
| Average  | 513,627 | 17,527 |
| Median   | 507,892 | 17,514 |

|          |         |        |
|----------|---------|--------|
| 2014 Max | 587,180 | 19,573 |
| Average  | 488,070 | 16,471 |
| Median   | 496,298 | 16,847 |

**CIA GREYSTONE & VINEYARD LODGE USE PERMIT ASSISTANCE**

Project No. 2016039 & 2016040

June 14, 2016

Revised September 2, 2016

**SUMMIT ENGINEERING, INC.**

Water Availability Analysis

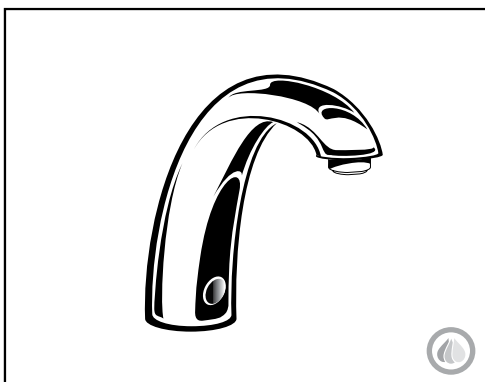
**ENCLOSURE B**

**MANUFACTURER'S SPECIFICATION SHEETS FOR FIXTURES**

*American Standard*  
Style That Works Better

**L-1**

**SELECTRONIC™**  
**ELECTRONIC PROXIMITY LAVATORY FAUCET**



### GENERAL DESCRIPTION:

Electronic faucet with proximity operation. Vandal-resistant solid brass construction with single post mounting. Operates on DC (battery) or AC permanent power. Water pressure range from 20 to 125 psi. Single inlet 15" flexible stainless steel hose with 3/8" compression fitting for spout connection.

### PRODUCT FEATURES:

**Vandal-Resistant Brass Body:** Durable - Excellent in high use applications.

**Power Options:**

- **Battery** - Approx. 4 years with Lithium Battery CR-P2
- **Plug-In - Integral** low voltage transformer (115 VAC supply) with 6 foot long power supply.

**Easy and Flexible Installation:**

Single post mounting with optional 4" and 8" Deck plate. Water resistant solenoid enclosure mounts to wall.

**Integrated; Easy Service Strainer:**

Patented integrated strainer enclosed in removable debris cup protects the solenoid valve and aerator from debris. Perforated stainless steel strainer is low maintenance and can be easily accessed.

**Temperature Mixing:**

Optional thermostatic mixing valve meets ASSE 1016 performance and anti-scald requirements at 0.5 GPM. Mixing valve will connect directly to solenoid inlet and is housed in matching enclosure.

**End Device:**

Choice of 0.5 GPM (1.9 L/min) pressure compensating, vandal-resistant spray or 1.5 GPM (5.7L/min) pressure compensating, vandal-resistant aerator.

### CODES AND STANDARDS:

These products meet or exceed the following codes & standards:

ANSI A117.1  
ASME A112.18.1  
CSA B 125  
NSF 61/Section 9



**ADA Compliant**

### MODEL NUMBER:

■ **DC POWERED; single inlet**

- ☒ **6055.105** with cast spout, 0.5 GPM pressure compensating, vandal-resistant spray.
- ☐ **6055.102** with cast spout, 1.5 GPM pressure compensating, vandal-resistant aerator.

■ **AC POWERED; single inlet**

- ☐ **6056.105** with cast spout, 0.5 GPM pressure compensating, vandal-resistant spray. Includes AC power supply.
- ☐ **6056.102** with cast spout, 1.5 GPM pressure compensating, vandal-resistant aerator. Includes AC power supply.

■ **MULTI AC POWERED; single inlet**

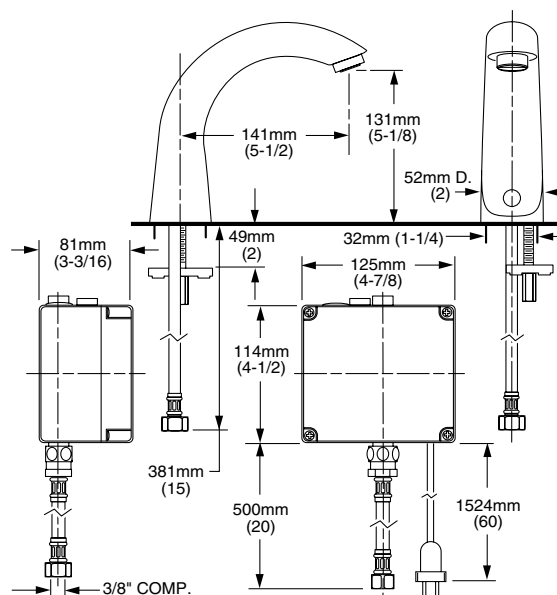
- ☐ **6057.105** with cast spout, 0.5 GPM pressure compensating, vandal-resistant spray. One power supply (sold separately) can operate up to 15 faucets in series. 10' extension cable included.
- ☐ **6057.102** with cast spout, 1.5 GPM pressure compensating, vandal-resistant aerator. One power supply (sold separately) can operate up to 15 faucets in series. 10' extension cable included.

■ **OPTIONAL 4" or 8" Deck plates**

- ☐ **605P.400** 4" brass deck plate with 1/4" fixation studs and quick spin nuts. (6-1/8" x 2-1/8" x 1/2")
- ☐ **605P.800** 8" brass deck plate with 1/4" fixation studs and quick spin nuts. (10-1/8" x 2-3/8" x 1/2")

■ **OPTIONAL Mixing Valve**

- ☐ **605XTMV** Thermostatic mixing valve, flex hoses 3/8" compression 20" hose length.



### RECOMMENDED SPECIFICATION

Electronic Proximity Lavatory shall feature vandal resistant all brass body with single inlet, and in-line strainer. Shall also feature a low energy use electronically operated solenoid valve and microprocessor controlled proximity sensors. Shall meet ANSI A112.18.1M and ANSI 117.1 codes. Fitting shall be American Standard Model # 6055\_\_\_\_, 6056\_\_\_\_, 6057\_\_\_\_.



**ELKAY®**  
SPECIFICATIONS

Food Service Flexible Spout Kitchen Faucet  
**Model(s) LKD2442BHC**

**S-1**

**PRODUCT SPECIFICATIONS**

Food Service Flexible Spout Kitchen Faucet. Faucet has a flow rate of 1.5 GPM, and is made of Chrome Plated Brass material, with a Quarter Turn Ceramic Disc valve. Faucet requires 3 faucet holes.

|                                |                                 |
|--------------------------------|---------------------------------|
| <b>Mounting Type:</b>          | Deck Mount                      |
| <b>Special Features:</b>       | Low Flow<br>Removable cartridge |
| <b>Finish:</b>                 | Chrome                          |
| <b>Handle Type:</b>            | 4" Lever Handle                 |
| <b>Deck Clearance:</b>         | 10"                             |
| <b>Spout Reach:</b>            | 8"                              |
| <b>Spout Height:</b>           | 12-1/8"                         |
| <b>Hole Drillings:</b>         | 3                               |
| <b>Material:</b>               | Chrome Plated Brass             |
| <b>Valve Type:</b>             | Quarter Turn Ceramic Disc       |
| <b>Valve Connection:</b>       | 1/2"-14 NPSM                    |
| <b>Flow Rate:</b>              | 1.5 GPM                         |
| <b>Spout Clearance:</b>        | 10"                             |
| <b>Faucet Hole Size (min):</b> | 1-1/4"                          |
| <b>Faucet Hole Spread:</b>     | 4"                              |
| <b>Spout Swing Rotation:</b>   | 360°                            |
| <b>Spout Type:</b>             | Flexible Spout                  |

**Special Note:** All operating parts are replaceable from above deck

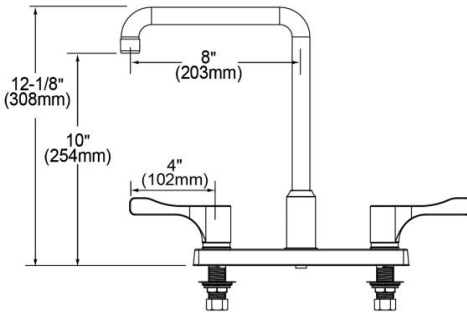


AMERICAN PRIDE. A LIFETIME TRADITION.  
Like your family, the Elkay family has values and traditions that endure. For almost a century, Elkay has been a family-owned and operated company, providing thousands of jobs that support our families and communities.



**Product Compliance:** ADA  
ASME A112.18.1/CSA B125.1  
NSF 372 (lead free)  
NSF 61

[Clean and Care Manual \(PDF\)](#)  
[Installation Instructions \(PDF\)](#)  
[Limited Warranty \(PDF\)](#)



PART: \_\_\_\_\_ QTY: \_\_\_\_\_  
PROJECT: \_\_\_\_\_  
CONTACT: \_\_\_\_\_  
DATE: \_\_\_\_\_  
NOTES: \_\_\_\_\_  
APPROVAL: \_\_\_\_\_

*In keeping with our policy of continuing product improvement, Elkay reserves the right to change product specifications without notice. Please visit [elkay.com](http://elkay.com) for the most current version of Elkay product specification sheets. This specification describes an Elkay product with design, quality, and functional benefits to the user. When making a comparison of other producers' offerings, be certain these features are not overlooked.*

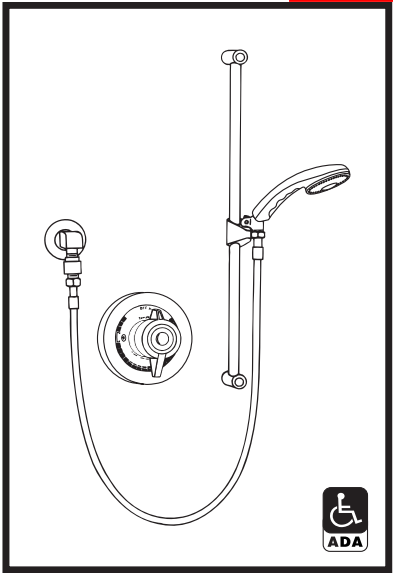
SH-1

**BP-56-300-B30-V**  
**Temptrol II™ Shower**  
**System with Hand Spray**

Temptrol II Pressure Balancing mixing valve with adjustable stop screw to limit handle turn. Wall/hand shower with 5' flexible metal hose, in-line vacuum breaker, wall connection and flange. 30" slide bar for hand shower mounting.

**Modifications:**

- ☒ **Suffix X:** Integral service stops—allows water shut-off at valve for service
- ☒ **Suffix B:** Chrome brass escutcheon on valve
- Suffix B48:** 48" adjusting bar in place of standard 30" bar
- Suffix 6:** 6' hose in place of standard 5' hose
- Suffix 2.0:** 2.0 gpm (7.8 L/min) flow rate
- ☒ **Suffix 1.5:** 1.5 gpm (5.7 L/min) flow rate



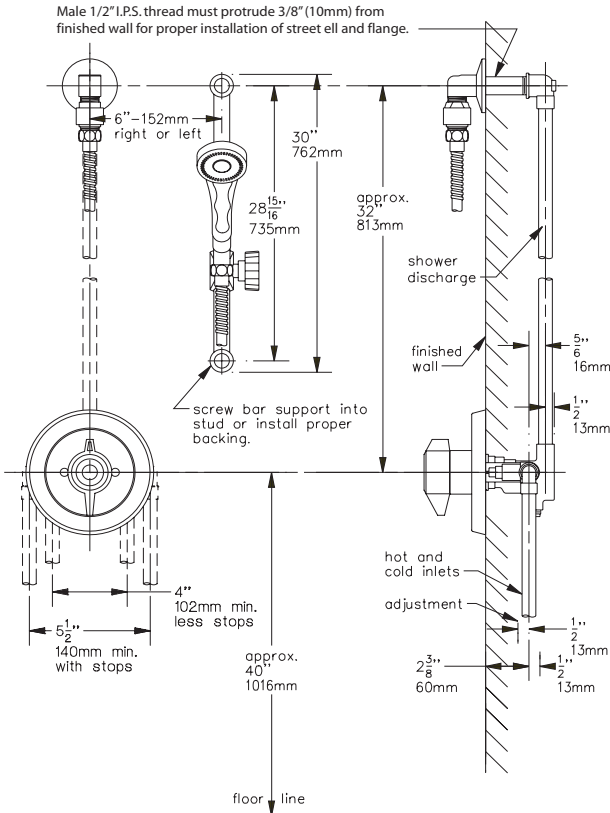
**SYMMONS PRODUCTS MEET  
ANSI A112.18.1M, EPA '92  
AND ALL KNOWN FLOW RATE  
REQUIREMENTS.  
Shower Heads and Hand Showers  
2.5 GPM (9.5 L/min)**

**Job/Location**

**Engineer**

**Contractor**

 This drawing to be used for rough-in installation only. All floor to center dimensions optional. Concealed piping and fittings not furnished by manufacturer. Dimensions are for ADA compliance (Americans with Disabilities Act) consult ADAAG or your state regulations for proper product choice and mounting locations. For complete installation, adjustment and service information see installation instructions.



Symmons Industries, Inc. ■ 31 Brooks Drive ■ Braintree, MA 02184  
(800) 796-6667, (781) 848-2250 ■ Fax (800) 961-9621, (781) 843-3849  
Website: [www.symmons.com](http://www.symmons.com) ■ Email: [customerservice@symmons.com](mailto:customerservice@symmons.com)

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**SYMMONS®**  
the smart choice™

*American Standard*

Style That Works Better

**WASHBROOK® FloWise® UNIVERSAL URINAL**

- Vitreous china
- Ultra High Efficiency, Low Consumption. Operates in the range of 0.125gpf to 1.0gpf (0.5 Lpf to 3.8 Lpf)
- Flushing rim
- Elongated 14" rim from finished wall
- Washout flush action
- Extended sides for privacy
- 3/4" inlet spud
- Outlet connection threaded 2" inside (NPTF)
- 2 wall hangers
- Fixture only
- Strainer included
- Meets ASME flush requirements at 0.125 to 1.0 gpf

☒ **6590.001** Universal Top spud

☐ **6515.001** Universal Back spud

**Nominal Dimensions:**

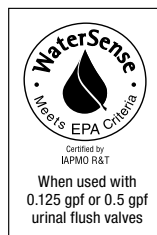
360 x 480 x 664mm

(14-1/8" x 18-7/8" x 26-1/8")

Recommended working pressure – between  
20 psi at valve when flushing and 80 psi static

**Compliance Certifications -****Meets or Exceeds the Following Specifications:**

- ASME A112.19.2-2008/CSA B45.1-08 for Vitreous China Fixtures



**UR-1**

**WASHBROOK® FloWise®  
UNIVERSAL URINAL**  
VITREOUS CHINA



SEE REVERSE FOR ROUGHING-IN DIMENSIONS

**To Be Specified:**

☐ Color: ☐ White

☐ Flush Valve:

1.0 gpf Flush Valve: Sensor-Operated:

☐ American Standard Selectronic® #6063.101.002  
DC Power (Top Spud)

☐ American Standard Selectronic® #6062.310.007  
AC Power (Back Spud)

1.0 gpf Flush Valve: Manual-Operated:

☐ American Standard # 6045.101.002

0.5 gpf Flush Valve: Sensor-Operated:

☐ American Standard Selectronic® #6063.051.002  
DC Power (Top Spud)

☐ American Standard Selectronic® #6062.305.007  
AC Power (Back Spud)

0.5 gpf Flush Valve: Manual-Operated:

☐ American Standard #6045.051.002

0.125 gpf Flush Valve: Sensor-Operated:

☐ American Standard Selectronic® #6063.013.002  
DC Power (Top Spud)

☐ American Standard Selectronic® #6062.301.007  
AC Power (Back Spud)

0.125 gpf Flush Valve: Manual-Operated:

☐ American Standard #6045.013.002



## Sloan ECOS® Flushometers

### ECOS 8111-1.28

WC-1

#### ► Code Number

3370448

#### ► Description

Exposed, Battery Powered, Sensor Activated ECOS® Model Water Closet Flushometer for floor mounted or wall hung top spud bowls.

#### ► Flush Cycle

Model 8113-3.5 Low Consumption (3.5 gpf/13.2 Lpf)

Model 8111 Low Consumption (1.6 gpf/6.0 Lpf)

#### ► Specifications

Quiet, Exposed, Diaphragm Type, Closet Flushometer for either left or right hand supply with the following features:

- Vacuum Breaker Flush Connection and Spud Coupling, Wall and Spud Flanges
- Spud Coupling and Flange for 1½" Top Spud
- Flush Accuracy Controlled by CID Technology
- Sweat Solder Adapter with Cover Tube and Cast Set Screw Wall Flange
- Diaphragm, Stop Seat and Vacuum Breaker to be molded from PERMEX® rubber compound for Chloramine resistance
- Infrared Sensor with Multiple-focused, Lobular Sensing Fields for high and low target detection
- Initial Set-up Range Indicator Light (first 10 minutes)
- User friendly three (3) second Flush Delay
- "Low" Flashing LED
- ADA Compliant Battery Powered Infrared Sensor for automatic "No Hands" operation
- 1" I.P.S. Screwdriver Bak-Chek® Angle Stop with free spinning, vandal resistant Stop Cap with Adjustable Tailpiece
- Infrared Sensor with Multiple-focused, Lobular Sensing Fields for high and low target detection
- Latching Solenoid Operator
- Infrared Sensor Range Adjustment Screw
- Fixed Metering Bypass and No External Volume Adjustment to Ensure Water Conservation
- Flex Tube Diaphragm designed for improved life and reduced maintenance
- Engineered Metal Cover with replaceable Lens Window
- Courtesy Flush® Override Button
- Four (4) Size AA Batteries factory installed

Valve Body, Tailpiece and Control Stop shall be in conformance with ASTM Alloy Classification for Semi-Red Brass. Valve shall be in compliance with the applicable sections of ASSE 1037. Installation conforms to ADA requirements.



#### ► Automatic Operation

Sloan ECOS® Flushometers activate via multi-lobular sensor detection to provide the ultimate in sanitary protection and automatic operation. A battery powered infrared sensor sets the flushing mechanism after the user is detected and Completes the flush when the user steps away.

#### ► Functional & Hygienic

Touchless, sensor operation eliminates the need for user contact to help control the spread of infectious diseases. The G2 Optima Plus® Flushometer is provided with an Override Button to allow a "courtesy flush" for individual user comfort.

#### ► Economical

Sloan installed batteries speed installation and provide years of metered flushing to control the use of water and energy. Batteries can be changed without turning off the water.

#### ► Compliance



This space for Architect/Engineer Approval

#### ► ELECTRICAL SPECIFICATIONS

##### Control Circuit

Solid State

SLOAN 10500 SEYMOUR AVE. • FRANKLIN PARK, • IL. 60131

Ph: 1-800-9-VALVE-9 or 1-847-671-4300 • Fax: 1-800-447-8329 or 1-847-671-4380 • <http://www.sloan.com>



February 17, 2017

Noah Housh  
City of St. Helena  
1480 Main Street  
St. Helena, CA 94574

RE: Culinary Institute of America Expansion

Dear Mr. Housh,

This law firm represents a group of concerned St. Helena citizens ("Citizens"). Our clients are troubled by the size and scale of the Culinary Institute of America ("CIA") expansion of their Greystone campus located at 2555 Main Street ("Greystone Property") and their Vineyard Lodge Housing development on 830 Pratt Avenue in St. Helena ("Vineyard Lodge") (collectively the "Project").

The CIA has applied to the City of St. Helena ("City") to dramatically expand their services. In a city with less than 6000 residents, the environmental impacts of this Project will be significant. The CIA has applied for the following:

- **Increase** the enrolment to the CIA by **100** permanent residents for a total student body of 300 students.
- **Increase** the number of permanent staff by 7 teachers.
- Building of **new** 4468 sf storage cave.
- Three **new** residential buildings for CIA students ("Dormitories")
  - Building A is 17,885 sf (70 Beds)
  - Building B is 11,380 sf (52 Beds)
  - Building C is 11,380 sf (42 Beds)

**Total new Dormitory square footage is 40,645**

**Total number of students at the Vineyard Lodge is 224 (Increase of 123)**

Total of 72 parking places for 224 occupants which requires a Variance.

- Adding over 40,000 square feet of urban use **outside of the Urban Limit Line of the City.**

---

2100 TWENTY FIRST STREET ■ SACRAMENTO, CALIFORNIA 95818 ■ T 916.456.9595 F 916.456.9599  
1485 MAIN STREET ■ ST. HELENA, CALIFORNIA 94574 ■ T 707.294.2775 F 707.968.5728  
www.aklandlaw.com ■ blog.aklandlaw.com

Mr. Housh  
 February 17, 2017  
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- Adding to additional traffic to Hwy 29/ Pratt Avenue intersection where the Level of Service (“LOS”) is below the required standards.

#### Standard for Project Review

Under CEQA, an initial study is conducted to determine the level of environmental review required for CEQA compliance. *CEQA Guidelines Section 15063*. With this Project, the City of St. Helena, as the lead agency, conducted an initial study and determined that a mitigated negative declaration is the appropriate environmental review for this Project, rather than an Environmental Impact Report (EIR). As we will outline in this letter, we believe that several Project features were improperly analyzed or overlooked in the initial study and that the Project will have significant environmental impacts. Therefore, a Mitigated Negative Declaration is not the appropriate environmental document for this Project, and the City should initiate an EIR to analyze the environmental impacts of this Project.

CEQA requires the preparation of an EIR whenever it can be fairly argued on the basis of substantial evidence that the project may have a significant environmental impact. *No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal. 3d 68, 75. CEQA Guidelines section 15382 defines the term “significant effect on the environment” as “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.”

#### Cumulative Impacts

In addition to evaluating the direct and indirect impacts caused by this Project, the City of St. Helena must also “assess whether a cumulative effect requires an EIR.” *CEQA Guidelines Section 15604 (h)(1)*. According to the CEQA Guidelines, when assessing whether a cumulative effect requires an EIR, the lead agency shall consider whether the cumulative impact is significant and whether the effects of the project are cumulatively considerable. An EIR must be prepared if the cumulative impact may be significant and the project’s incremental effect, though individually limited, is cumulatively considerable. Cumulatively considerable means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. *CEQA Guidelines Section 15064 (h)(1)*.

In order to flesh out the circumstances in which the incremental effects of an individual project are cumulatively considerable the agency must first incorporate mitigation measures into the project such that it’s incremental impact is no longer cumulatively considerable. The initial study should explain why the identified mitigation measures will render the project’s contribution less than cumulatively considerable. *CEQA Guidelines Section 15064 (h)(2)*. Next the agency may determine that a project’s

Mr. Housh  
February 17, 2017  
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incremental contribution to cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program which provides specific requirements that will avoid or substantially lessen the cumulative problem...within the geographic area in which the project is located.”

The Court of Appeal in *Communities for a Better Environment v. California Resources Agency* (3d Dist. 2002) 103 Cal. App. 4<sup>th</sup> 98, emphasized that the lead agency must examine the impacts of the project under review against the backdrop of the cumulative conditions, and may not rely on the fact that a particular project’s impacts are small in comparison to a large environmental problem, such as traffic, water quality, or air quality. Accordingly, in considering whether a project’s impacts are “cumulatively considerable” the agency may not employ a “de minimis” rationale because to do so would ignore the potential impacts of the project in combination with past, present or future projects.

This cumulative impact analysis for this Project specifically applies to the traffic impacts. The 1993 St. Helena General Plan specified Roadway and Intersection Criteria to identify potential impacts from proposed development projects. The 1993 General Plan states that: All unsignalized intersections must maintain LOS C. In the initial study completed by the City it states that “with the project, study intersections will improve slightly with the exception of Pratt Ave./ SR Hwy 29 WB which will operate unacceptably under LOS “F” during AM and PM Peak hours with and without the project under both scenarios for baseline and future conditions.” Further, the Project’s traffic study specifically identifies a significant impact. The study states “Westbound Pratt Avenue turns would experience extreme delays (LOS F).... The project increment of 4 trips **would add to the existing lengthy delays**; it would add 5.5 percent additional traffic to the westbound intersection approach during the AM and PM peak hours.”

The Project’s initial study failed to complete a proper cumulative impact analysis. If a cumulative impact analysis was properly done, the City would have concluded that potential impacts of past, current and future impacts on the Hwy 29/ Pratt Avenue intersection creates a potentially significant impact at this location. When an incremental impact of a project is cumulatively considerable, an agency must discuss that impact in an EIR. Since this Project incrementally contributes to a significant impact, an Environmental Impact Report must be conducted in order to properly analyze the cumulative impacts of the Project.

#### Indirect Impacts

Although items like waste water, water supply, and public services have been deemed to be less than a significant impact in the initial study, what is troubling, and it is not contemplated in the initial study, is that this Project is using up the City’s precious and finite resources, and that the approval of this Project could potentially prevent future and more meaningful projects from acquiring conditional use permit approval. With this



Mr. Housh  
 February 17, 2017  
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Project, the City would be adding **100** new City residents for a total of 300 students in perpetuity. If the City uses up their limited public infrastructure and resources on this Project, then it may not have the capacity to approve projects that are necessary for the City like: local serving businesses, family housing, and hotels that produce transient occupancy tax revenue, since those types of projects may push the City over an environmental threshold in terms of the City's ability to provide municipal services like drinking water and proper disposal of wastewater.

The indirect impacts of this Project have not been analyzed and they could be significant. The City has a fragile and limited budget and failing municipal services. The City Manager in an article printed on July 16, 2016 in the St. Helena Star stated that the "city's infrastructure needs are "woefully unmet," and even everyday operations are a struggle. The city's water fund is taking \$1.3 million out of its reserves, the wastewater fund has no reserves left at all..." Every project that is approved by the City, especially large projects like this one, may be the City's last project that it is able to provide services for. The City will most likely not be able to provide for future necessary projects if it adds 100 new residents to the City with this Project. We believe that the change caused by this Project sets into motion a chain of events that would foreseeably culminate in impacts on the physical environment. This potential and foreseeable impact was not analyzed by the lead agency in the initial study.

#### Flaws in Project Proposal

##### **Flaws in Project traffic study:**

The Project's traffic study is one of the most critical aspects of the Project. The Project is located at the northern gateway to St. Helena. Currently, there are severe and obvious delays at the Pratt Avenue/Hwy 29 intersection. Any additional car trips that are added to this already impacted intersection should be considered significant. That is why it is critical that the traffic study is properly conducted. A realistic traffic study will provide the decision makers with the tools they need to make an informed decision.

The traffic study is flawed since it only focuses on weekday (Monday-Thursday) traffic. Traffic impacts at the Hwy 29/ Pratt Avenue intersection are much more severe on Friday, Saturday and Sunday. During those days, there are more travelers on this roadway. The traffic study states that: "Traffic counts (counting cars) were conducted by Crane Transportation Group at the Pratt Avenue/ S.R. 29-128 intersection on Thursday, May 12 from 7:00AM to 6:00PM. The peak hours of total traffic passing through the intersection was determined to be 7:45 to 8:45AM and 4:00 and 5:00PM on Thursday. Students residing at Vineyard Lodge do not attend classes on the weekend, thus the analysis focuses on weekday activities."

Our criticism of this study is that it fails to conduct traffic counts at the peak tourist days during the peak tourist season when traffic is more congested. The study says that it

Mr. Housh  
 February 17, 2017  
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made “adjustments” to the study to account for the tourist season. This is such a critical analysis for the Project, therefore the traffic study should have been conducted on a Friday when the tourist season is actually occurring so that that analysis is able to capture a realistic assessment of the current conditions. Without this real time analysis, the numbers used by the traffic engineer for the baseline are speculative and flawed.

Further, the Project traffic study failed to include a potential future project in the traffic study. The Beringer Winery is located at the Pratt Ave/ Hwy 29 intersection. The Beringer Winery is a very larger winery, and they have applied to modify their use permit. Under CEQA, an initial study must include reasonable foreseeable projects when analyzing project impacts. The Project’s traffic study failed to incorporate Beringer’s increased traffic when analyzing the Project impacts. This must be cured to allow the lead agency to fully understand the existing conditions, the Project impacts, and the cumulative impacts.

Moreover, the Los Alcobas Hotel was included in the traffic study as it is located near the Pratt Ave/Hwy 29 intersection. We believe the traffic inputs that were used in the traffic study are not representative of how the Los Alcobas Hotel will actually function. Since the opening of Los Alcobas Hotel is imminent, we urge the lead agency to analyze the traffic patterns of the Pratt Ave/ Hwy 29 intersection after the Los Alcobas Hotel has opened, so that there is clear and accurate assessment of the traffic at this intersection.

#### **Flawed procedure:**

The Project delicately hinges on the assumption that the CIA is going to be able to successfully prevent the students from possessing and using their own cars in perpetuity, in order to give the perceived notion that that Project’s traffic impacts are not significant. A negative declaration may be defective if it mischaracterizes the proposed project and fails to acknowledge evidence showing that significant effects may occur. *Christward Ministry v. Superior Court (4<sup>th</sup> District 1986) 184 Cal App. 3d 180.*

There are likely flaws in the City’s Project analysis because the initial study failed to limit the use and amount of cars through Project mitigations. The proposed project states that: “All 100 (new) additional students would be living at the Vineyard Lodge housing on Pratt Avenue in St. Helena and attending weekday classes at the Greystone facility. These students will be shuttled to and from the CIA Greystone campus on weekdays, as they would not be allowed to use a personal vehicle to access classes, consistent with the current practice.” Without a doubt, the applicant is attempting to limit the amount of cars that the students utilize in an attempt to make the Project’s traffic impacts less than significant. The problem with this approach is that these restrictions should be part of the project mitigations and not a part of a “standard practice”. If the restrictions on car usage are not a part of the Project mitigations, a violation by the CIA of this use is not enforceable by the lead agency.

Mr. Housh  
 February 17, 2017  
 Page 6 of 7

If all of the students at Vineyard Lodge have and use cars for weekend trips or to participate in jobs outside of St. Helena, then the Project traffic impacts would be significant. Since there is no restriction through a mitigation measure on the number of cars that are allowed, the City is not able to legally enforce whether students can use their cars in the future. If a limitation of car usage is not a part of the Project's mitigations, then this aspect of the Project will be unenforceable by the City. Since, the City has no power to limit the Project's car usage, it is reasonably foreseeable that the Project would create a significant traffic impact since the Project is located at an intersection that currently is operating below the required standards.

#### **What if the CIA moves to Napa?**

The CIA has purchased a large and expensive facility in the City of Napa. They have relocated a large portion of their operations to this southern campus. Since the CIA has a considerable portion of their operations in Napa, what would happen if they decided to move *all* of their operations to Napa, and attempted to sell their St. Helena properties.

If the CIA were to relocate, the Vineyard Lodge property would not be able to stand on its own, due to the Project's restrictions on parking and the lack of cars that would be allowed on the Property. With these severe restrictions, the Pratt Avenue Property would be a tainted asset that has no marketable value.

The Vineyard Lodge cannot operate independent of the Greystone property. Since this is the case, the CIA would only be able to sell both properties as a bundle deal, and the seller would have to comply with the terms of the approved conditional use permit (which most likely works for no one else except for the CIA). These potential conditions make the property a non-marketable asset.

This means that if the CIA were to move all of their operations to the southern campus, this will leave the Pratt Avenue neighborhood with over 40,000 square feet of building that does not have independent value.

Therefore, it is reasonably foreseeable that the CIA would ask the City to allow the use to exist as apartments (with a lack of parking spaces for the tenants). An alternative scenario would be that the CIA would be forced to demolish the Vineyard Lodge because the permitted use only works for their school but fails to meet the needs for any other buyer. With an approval of this Project, the City is essentially pigeon holing the use of the Pratt Avenue Property which is poor land use planning and this could create significant long term issues for the City of St. Helena.

Mr. Housh  
February 17, 2017  
Page 7 of 7

Conclusion

In this communication, we have identified a number of issues and potential significant impacts with this proposed Project. We recommend that the City conduct an EIR to properly analyze all of the Project impacts.

Without a comprehensive environmental analysis the decision makers will be asked to take a "leap of faith" when making a determination on this Project. This is a very large project in size and scope for the City of St. Helena. We strongly believe that an EIR is required. As of now, the proper environmental review has not been conducted.

Very truly yours,



Brian Russell



BR/sb

cc: Naomi Glass  
Pam and Mike Griffin  
Donna and Rusty Hinds  
Gary and Sharon Lessing  
Jose and Kari Martin  
Anthony Micheli  
Carol and Philip Norfleet  
Carol and Fred Papina  
Teri Zingale

**Lilly Bianco**

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**From:** Pierette Titus <pierettetitus@icloud.com>  
**Sent:** Thursday, February 16, 2017 2:47 PM  
**To:** Lilly Bianco  
**Cc:** Paul Dohring; Geoff Ellsworth; Alan Galbraith  
**Subject:** CIA Dorm Expansion

Dear Ms. Bianco,

I'm a homeowner on Park Street for the last 18 years. It has come to my attention the proposal to expand the dorms and increase the number of students at CIA facility. We have serious concerns about the traffic and the safety impact this project will have in our neighborhood.

The intersection at Pratt Avenue and Main Street is dangerous. There is very limited visibility of cars approaching both south and northbound directions. Cars park on the east side of Hwy 29 block the visibility for the driver on Pratt Ave intending to turn left to Main Street. The drivers heading north usually are accelerating as they approach the Elms tunnel. The angle and limited space to enter/exit Beringer tasting facility has caused many accidents throughout the years. Now, the newly build Las Alcobas Hotel and restaurant will exacerbate the already existing problems in that intersection. It is so hazardous for drivers trying to make a left turn from Pratt Avenue to Main Street that plainly speaking, it is suicidal. I'm aware about the shuttle that runs from the dorms to the CIA, however, the increase number of students will create more trips to and from both facilities, adding to the perils of the situation.

Our neighborhood will be directly affected by adding more students/drivers to the proposed expansion of the CIA dorms. The hazardous conditions on Pratt Ave and Main Street and the closure of Pratt Ave at Silverado Trail will divert more traffic to our neighborhood. It is a serious safety concern given the fact that we have many young families with children walking to school or riding their bikes. The city has already limited resources for first responders and emergency personnel and adding more traffic in this location will exacerbate, jeopardizing safety. These concerns are shared by many other residents in our neighborhood. I hope you, the mayor and council members carefully review and reconsider the approval of this project. At the minimum, it should be amended to address safety concerns expressed by this community.

Thank you for your attention,  
Pierette Titus

Sent from my iPad

**Lilly Bianco**

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**From:** Anya Pierce <pierce.anya@gmail.com>  
**Sent:** Thursday, February 16, 2017 3:01 PM  
**To:** Lilly Bianco  
**Subject:** CIA dorm expansion

To whom it may concern,

We already have a ton of traffic on Pratt and main, it's practically impossible to turn left. There have actually been traffic accidents on Main Street from this dangerous intersection.

Now Los Alcobos hotel is going to open, making more noise and traffic.

Please do not add to this traffic/ noise problem by expanding the CIA dorm.

Thanks,

Anya Pierce  
1767 Crinella Drive  
Saint Helena

Sent from my iPhone

**Cindy Black**

---

**From:** JOSE MARTIN <josekari@prodigy.net>  
**Sent:** Sunday, February 19, 2017 12:20 PM  
**To:** Lilly Bianco  
**Subject:** Stop CIA Pratt ave expansion

To whom it may concern.

This email is in regards to the Pratt Ave CIA Dorm expansion. My name is Jose Martin, My wife Kari and I have lived on Pratt Ave since 1997. We have seen plenty of changes around here since then. However, not too many projects have actually helped the community or improved the City infrastructure.

This is by far one of those projects, there is nothing the City will gain by allowing this project to move forward. No improvements to sewer, wastewater or the pavement on Pratt ave. It will increase traffic, water use, noise, use of city resources and make the intersection at Pratt Ave and Main St. even more difficult and dangerous to use. We see students walking up and down Pratt Ave every day at all times of the day, even late at night when its dark. The lighting on Pratt Ave is bad, there are no sidewalks or bike lanes. The student shuttle is going to increase, (who wants that on their street?) they have two buses now but plan on adding a third.

We do not want to see the additional traffic, noise and wastewater with no economic benefit to the city. We do not want to see the set back of a commercial building be reduced and the max building height should not be allowed to change.

Do not allow this project to move forward without proper planning and stringent requirements that benefit the city and community!

WE ARE AGAINST THIS PROJECT

Jose and Kari Martin  
1075 Pratt Ave  
St. Helena CA  
707-479-3690



**Cindy Black**

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**From:** Terri Reynolds <t.reynolds76@comcast.net>  
**Sent:** Friday, February 17, 2017 4:26 PM  
**To:** Lilly Bianco  
**Subject:** CIA Dorm Expansion

Hi Lilly,

My name is Terri Reynolds. My family and I live on Park St in Saint Helena. My husband and I have owned our home for the past 11 years. I am writing to respond to you about the CIA dorm expansion being currently considered on Pratt Street. I want you to know that I am opposed to this.

With the 70 room Starwood hotel Los Alcobas opening soon, our neighborhood cannot handle anymore growth and traffic. When I spoke with Noah last month about the hotel's lack of parking spaces, he said that the town had no plans on putting a light in at the corner of Pratt and Main Street. He said that traffic patterns were studied and there was no reason to put one in, but there will be a turn lane. With a possible CIA expansion, there will be a lot more traffic for the Crinella development. Light or no light, people will start using Park Street, as a cut through. It is already used as such when there are accidents on the Trail or 29. Both Pratt and Park get backed up and Park St residents are unable to get out of their driveways when this happens. This is a residential development similar to Signorelli/Chiles area and Sylvaner on the west side where children ride their bikes and scooters in the street. This is also a very desirable community for many young families because of the wide streets with cul du sacs and close proximity to town. I can assure you that none of the residents here will be happy to see to see this neighborhood turn into a busy thoroughway.

It is also extremely difficult making a left out of the development onto Main Street from Crinella. It can take one car several minutes to pull out due to increased traffic. If cars are parked at either corner, it's very hard to see traffic. In addition, people traveling southbound down Highway 29 should be reducing speed as they enter town but they are not. I also often find that if there is a break in traffic coming northbound, the southbound drivers still refuse to let you enter and if traffic has slowed or stopped, they will block you from entering the lane. The other concerns that I have is that the crosswalks at Crinella and Elmhurst are two of the most dangerous in the town. Drivers for the most part simply don't pay enough attention. When my children were younger and attended RLS Elementary, I refused to let them cross the street to walk to school. I was fortunate enough to be able to drive my kids everyday, but not every family can do so. With more traffic in this area, you run the serious risk of pedestrians getting struck by a car. I understand the town is looking to make money and that is why something like Los Alcobas would have been approved with no staff parking, but with 140 new staff members soon to be parking and driving in the area, the CIA expansion is way too much for me.

Thanks for your time.

Sincerely,

Terri Reynolds

Rusty Hinds  
777 Pratt Avenue  
St. Helena, CA 94574

VIA E-MAIL

February 20, 2017

Chairperson Kistner;  
Commissioners Monnette,  
Parker and Knudsen  
St. Helena Planning Commission  
1480 Main Street  
St. Helena, CA 94574

Re: 2555 Main Street and 830 Pratt Avenue

Chairperson Kistner and Commissioners,

In response to Mr. Meibeyer's letter to you, dated February 20, 2017, regarding the matter referenced above, I am respectfully submitting the following comments in correction of his misstatements and assumptions regarding the accuracy of my comments, which are factually supported by the underlying documents to the Initial Study/Mitigated Negative Declaration.

**Traffic Issues**

Crane Transportation Group conducted the traffic counts at the Vineyard Lodge driveway on Thursday, May 12, 2016 concurrent with Vineyard Lodge parking lot counts (Traffic Impact Report "TIR", Page 1). The focus of the study was on traffic patterns during the A.M. and P.M. peak hours with emphasis on the trips to and from Vineyard Lodge to Greystone.

My comment on the matter is accurate and states, "The TIR fails to consider the full magnitude of personal trip usage of the 72 permitted cars located at Vineyard Lodge." Given that the Vineyard Lodge driveway traffic study was performed on a weekday and was limited to those hours when most students are in class, proves my point on the limitation in scope and fallacy in the TIR statement, "There would be a small component of trips added to Pratt Avenue from the Vineyard Lodge.....attributable to students with parking permits traveling to and from downtown St. Helena and the surrounding area." The "full magnitude" of student personal car usage, from the Vineyard Lodge driveway, occurs during non-school days and non-school hours (i.e. weekends and holidays) resulting in a far more accurate numerical representation of the potential traffic impact during actual peak weekend traffic patterns in and around St. Helena.

With respect to the Pratt Avenue/Hwy 29 intersection issue, my comments are accurate in stating, "The TIR incorporates a theoretical estimate of the traffic contribution from the Las Alcobas driveway.....The TIR may prove to be inaccurate when actual traffic impacts resulting from the Las Alcobas Hotel begins operating at full capacity.....Since the Las Alcobas Hotel is a

large project (68 guest rooms plus a restaurant serving the general public), with potentially significant impacts in the same area as the proposed project and the proposed Beringer projects, it would be prudent to deny the proposed Vineyard Lodge expansion project until the actual full traffic impacts can be further determined.

### **Noise Issues**

In review of the 15 page Culinary Institute of America Vineyard Lodge Noise Study, prepared by ICF International and dated June 15, 2016, there is no language in support of Mr. Meibeyer's comment in paragraph two of his letter which states, "The students were on break and not attending classes from April 29 until May 2nd, but began arriving back to campus that day." The Noise Study actually states on page 9, "The existing CIA facility was unoccupied as students were on break. These measured noise levels therefore represent the lowest noise levels likely to be encountered in the area."

Given that the only source document made public for review, renders my comment accurate in stating, "The Noise Study was actually conducted in April-May 2016 while there were no students onsite at the Vineyard Lodge. As such, the results of the Noise Study are inaccurate since the actual onsite student noise contribution was not measured and not considered for mitigation." My further comment stating "Key findings of the study were not predicated on the proposed 224 students residing at the Vineyard Lodge." is completely accurate as evidenced by the Noise Study's statement (Page 12), "Gatherings could include up to 120 students who would live onsite." There was no qualifier included in the Noise Study statement, as Mr. Meibeyer suggests, "Further, given the students' schedules, it is reasonable to assume there would at most be a gathering of a maximum of 120 students (a bit more than 50% of the total students) in that area..... " His presumption that no more than 120 students will gather at an event in the Quad furthers my questions raised, "Does this set a maximum outdoor activity limit of 120 students that live onsite?" "What about participation by the other 104 students?"

### **Aesthetic Issues**

With respect to Mr. Meibeyer's comments regarding the Visual Impact Assessment ("VIA"), I read the document thoroughly, several times, and studied the Landscape Plan, prepared by Architectural Resources Group, in infinite detail, prior to preparing my comments. Not only do each of my comments, on the topic, remain valid and accurate, several of those made by Mr. Meibeyer are not supported by the documents made available to the public for review. For example, "In response to the issue of the VIA being conducted in the summer months while deciduous trees still retain their foliage, the author of the VIA has commented as follows: 'The deciduous nature of the existing surrounding landscape was considered when assessing the impacts of the of the proposed project.'" There is no evidence of this statement in the public record. Furthermore, the VIA computer generated renderings, depicting the before project and after project views, reflect all trees with full foliage. With the exception of the four (4) existing camphor trees, located along the southwest corner of Pratt Avenue, and the lone eucalyptus tree, located in the railroad right-of-way on the west side of the property, all of the other mature trees are deciduous and provide no screening in the Fall and Winter months. In addition, Mr. Meibeyer references, "In addition, as can be seen in the Landscape Plan, twenty eight (28) larger 24" boxed

trees will be planted on the property perimeter along with the relocation of 6 mature fruitless Mulberry trees, provided ample screening (while the Sycamore trees are deciduous, they are very large and mature and provide substantial screening the vast majority of the year and still provide some visual filtering during a short period of winter.) The vast majority of the scheduled trees, included in the Landscape Plan, are deciduous and will not provide additional screening during the Fall and Winter months. Further contradicting the landscape screening issue is the conclusion included in the Vineyard Lodge Traffic Impact Report (E. Site Lines at the Vineyard Lodge Driveway, page 16), "Therefore, sight lines would be acceptable assuming **no** landscaping is planted along the site frontage that would ultimately grow and block driver views."

The three story elements of Buildings A and C are not afforded any screening from the existing trees nor the future planned landscaping. These buildings are simply too tall (40'2") and their respective distances located from Pratt Avenue do not diminish the significant degradation of the visual character along Pratt Avenue. Mr. Meibeyer's statement "and continuing to locate a substantial portion of the Pratt Avenue improvements behind the existing camphor trees" is not accurately reflected on the Landscaping Plan inclusive of the 36' tall Building B located along the Pratt Avenue frontage.

### **Summary**

While it was unfortunate that I had to spend the time in response to Mr. Meibeyer's letter, which unsuccessfully attempted to undermine the accuracy and intent of my original comments to the findings in the Applicant's Initial Study/Mitigated Negative Declaration, it is important for each of you to know that I have spent innumerable hours reading, studying and digesting the contents of every document and attachment associated with the Applicant's matter.

Mr. Meibeyer's letter further reinforces my original summary conclusions, which are supported by the contents of the documents, that the Applicant has failed to thoroughly analyze each of the environmental factors that are potentially affected. Several of the technical studies are "nuanced" on a conditional set of variables, or factors, or limited in scope which has a direct bearing on the proper evaluation and classification of the potential impact. Contradictions in findings and conclusions between the Applicant's technical reports and the IS/MND reflect the effect each has on the degree of significance. As a result, the impact is either not properly classified as significant or potentially significant, which would warrant mitigation, or the mitigation measure offered is ineffective in the rendering of significance of impact to less than significant status.

Pursuant to CEQA, Section 21082.2.d "If there is substantial evidence, in light of the whole record before the lead agency, that a project may have a significant effect on the environment, an environmental impact report shall be prepared." In the event the Planning Commission finds that the project should not be denied on the criteria of Design Review or Use Permit findings, the Applicant should be required to perform an EIR to fully delineate the Potentially Significant Impacts to the environment.

I appreciate each of you and your time in consideration of my reply, the content of my original comments (Public Comment 16) and the opportunity to address the issues associated with this most significant project during the scheduled Planning Commission meeting tomorrow night.

Respectfully yours,

Rusty Hinds

cc: Charles Meibeyer  
Brian Russell

# Comments to Culinary Institute of America Campus Master Plan

IS/MND



# IS/MND

- The Initial Study must properly classify project impacts
- Degree of Impact Significance influenced by:
- Conditional or erroneous generation/analysis of data/variables limiting outcomes or conclusions
- Unrecognized, unreconciled contradictions in underlying technical reports
- Mitigation measures that are ineffective

# Aesthetics

- VL high intensity (Building massing, height) is inconsistent with character of surrounding land use. Massing is a “hallmark” metric contemplated by Planning Commission
- Mitigation Measure (AES-1) Landscape Plan is ineffective in properly screening significant visual impact of mass and height
- “Sight lines acceptable assuming no landscaping planted along site frontage that would grow and block drivers views” (TIR, VL exit driveway)
- Potentially significant impact. Not mitigated

KEY

- EXISTING TREE RETAINED  
SEE EXISTING VEGETATION PLAN
- PROPOSED TREE
- PROPOSED SHRUBS
- WOOD MULCH IN ALL  
PLANTED AREAS

PLANT LIST

| KEY | BOTANICAL NAME                 | COMMON NAME             | QTY | SIZE AND REMARKS     |
|-----|--------------------------------|-------------------------|-----|----------------------|
| A   | ACER PALMATUM 'SANGO-KAKU'     | CORAL BARK MAPLE        | 8   | 24" BDN              |
| B   | BURDERIA THUNBERGII            | BARKBERRY               | 31  | 5 GAL                |
| C   | CALLISTEMON SP.                | BOTTLEBRUSH TREE        | 1   | 15 GAL               |
| D   | CRISTUS SANTOIIUS 'PROSTRATUS' | DWARF WHITE ROCK ROSE   | 90  | 1 GAL                |
| E   | EPHEDRA 'STYFUR'               | CALIFORNIA FUCHSIA      | 40  | 1 GAL                |
| F   | FEDIA NELLO PWANA              | FRSAPLE GRASS           | 16  | 15 GAL               |
| G   | FRAGARIA CHLOEUSSEN            | BEACH STRAWBERRY        | 95  | 4" HTS. IN BROWALES  |
| H   | HYDRANGIA QUERCOFOLIA          | CALIF. HYDRANGEA        | 15  | 5 GAL                |
| I   | LALURUS NOBILIS                | SWEET BAY               | 4   | 15 GAL               |
| J   | MONS. ALBA                     | FRUITLESS MULBERRY TREE | 8   | TRANSPLANTED ON SITE |
| K   | SABELLA TEXTURISMA             | FRUITLESS MULBERRY TREE | 8   | TRANSPLANTED ON SITE |
| L   | OLEA LITTLE OLLIE              | OLIVE SHRUB             | 80  | 1 GAL                |
| M   | OLEA SWAN HILL                 | FRUITLESS MULBERRY TREE | 8   | TRANSPLANTED ON SITE |
| N   | PISTACHIA BUNNUS               | CHINESE PISTACHE        | 15  | 24" BDN              |
| O   | PUNICUM SP.                    | POMEGRANATE             | 4   | 15 GAL               |
| P   | RHAMNUS CALIFORNICA 'EVE CASE' | COTTEBERRY              | 12  | 5 GAL IN BROWALES    |
| Q   | ROSA 'GILBERT'                 | GILBERT ROSE            | 25  | 5 GAL                |
| R   | ROSMARINUS 'TUSCAN BLUE'       | TUSCAN BLUE ROSEMARY    | 10  | 5 GAL                |
| S   | SYMPHORICARPUS ALBUS           | SNOWBERRY               | 18  | 5 GAL IN BROWALES    |
| T   | TEUCRIUM GRAMAEDES             | GERMANDER               | 60  | 1 GAL                |

PLANTING NOTES:

- ALL PLANTS AND LAWN TO BE IRRIGATED WITH AN AUTOMATED IRRIGATION SYSTEM. IRRIGATION SOURCE IS TO BE CITY WATER.
- ALL PROPOSED PLANT MATERIALS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION AND WILL BE REJECTED IF NOT IN COMPLIANCE WITH INDUSTRY STANDARDS. PLANTS SHALL BE PRUNED PRIOR TO INSPECTION.
- THE PLANT GROWTH SHALL GOVERN IF ANY DISCREPANCY IS FOUND BETWEEN THE PLANT GROWTH AND THE PLANTING PLANS.
- PLANTING AREAS SHALL BE CLEARED OF ALL WEEDS AND DEBRIS PRIOR TO SOIL PREPARATION. IN THE CASE OF PERENNIAL WEEDS, A SYSTEMATIC HERBICIDE SHALL BE APPLIED PRIOR TO CLEARING. IT PARTICULARLY DIFFICULT WEEDS SUCH AS WILD ONION ARE ENCOUNTERED, THE LANDSCAPE ARCHITECT AND OWNERS SHALL BE ADVISED PRIOR TO PROCEEDING.
- ALL PLANTING OPERATIONS SHALL BE PERFORMED BY PERSONNEL FAMILAR WITH THIS TYPE OF WORK AND UNDER THE SUPERVISION OF A QUALIFIED PLANTING FOREMAN.
- THE LANDSCAPE CONTRACTOR SHALL SUPPLY AND CULTIVATE 2 INCHES OF NETROLIZED FIR BARK AND 1 INCH OF 5/16" MESH LAVA STONE INTO THE TOP 4 INCHES OF ALL PLANTING AREAS. BOTTLES IN LOTS AS REQUESTED, OR HAND WORK NEAR ROOT SYSTEMS OF EXISTING TREES.
- ALL PLANT MATERIAL SHALL BE DELIVERED TO THE JOBSITE FOR INSPECTION. PRIOR TO PLANTING, THE CONTRACTOR SHALL CONFIRM LOCATIONS OF ALL PLANTS WITH THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL GIVE 5 DAYS NOTICE OF PLANT DELIVERY AND PLACEMENT.
- ON COMPLETION OF PLANTING AND IRRIGATION INSTALLATION, ALL PLANTED AREAS SHALL RECEIVE A UNIFORM LAYER OF 2 INCHES OF FIR BARK WOOD MULCH. CONTRACTOR SHALL PROVIDE A SAMPLE OF MULCH PRIOR TO PROCEEDING.
- THE LANDSCAPE CONTRACTOR SHALL MAKE NO CHANGES TO THE PLANT LAYOUT WITHOUT CONSENT OF THE LANDSCAPE ARCHITECT.
- THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL NEW PLANTING FOR A 6 MONTH PERIOD OR UNTIL THERE IS EVIDENCE OF POSITIVE GROWTH. THE GUARANTEE PERIOD SHALL BEGIN AFTER FINAL INSPECTION AND APPROVAL.
- ANY PLANTS THAT DIE OR ARE DAMAGED SHALL BE REPLACED IMMEDIATELY.

HYDROZONES

| NUMBER | DESCRIPTION          | WATER USE |
|--------|----------------------|-----------|
| H1     | LOW DENSITY PLANTING | LOW/DRIP  |
| H2     | LOW DENSITY PLANTING | LOW/DRIP  |
| H3     | LOW DENSITY PLANTING | LOW/DRIP  |
| H4     | LOW DENSITY PLANTING | LOW/DRIP  |
| H5     | LOW DENSITY PLANTING | LOW/DRIP  |
| H6     | LOW DENSITY PLANTING | LOW/DRIP  |
| H7     | LOW DENSITY PLANTING | LOW/DRIP  |
| H8     | LOW DENSITY PLANTING | LOW/DRIP  |
| H9     | LOW DENSITY PLANTING | LOW/DRIP  |
| H10    | LOW DENSITY PLANTING | LOW/DRIP  |
| H11    | LOW DENSITY PLANTING | LOW/DRIP  |
| H12    | LOW DENSITY PLANTING | LOW/DRIP  |
| H13    | LOW DENSITY PLANTING | LOW/DRIP  |
| H14    | LOW DENSITY PLANTING | LOW/DRIP  |
| H15    | LOW DENSITY PLANTING | LOW/DRIP  |
| H16    | LOW DENSITY PLANTING | LOW/DRIP  |
| H17    | LOW DENSITY PLANTING | LOW/DRIP  |
| H18    | LOW DENSITY PLANTING | LOW/DRIP  |
| H19    | LOW DENSITY PLANTING | LOW/DRIP  |
| H20    | LOW DENSITY PLANTING | LOW/DRIP  |
| H21    | LOW DENSITY PLANTING | LOW/DRIP  |
| H22    | LOW DENSITY PLANTING | LOW/DRIP  |
| H23    | LOW DENSITY PLANTING | LOW/DRIP  |
| H24    | LOW DENSITY PLANTING | LOW/DRIP  |

HYDROZONE NUMBERS CORRESPOND WITH UNIFORM ZONE NUMBERS ON IRRIGATION PLAN.

REFER TO MWELD CALCULATIONS.

Architectural  
Resources Group

Pier 9, The Embarcadero, Suite 107  
San Francisco, California 94111  
415.421.1680  
arg.com

Wendt • L.A.  
LANDSCAPE ARCHITECTURE

1001 North Market Street, Suite 1000  
San Francisco, CA 94103  
415.421.1680

RESPONSE TO CITY  
COMMENTS 9.06.2016

| NO. | DESCRIPTION | DATE |
|-----|-------------|------|
|-----|-------------|------|

THE CULINARY  
INSTITUTE OF  
AMERICA

AT PRATT AVENUE  
830 PRATT AVENUE  
ST. HELENA, CALIFORNIA

SHEET TITLE  
LANDSCAPE  
PLAN

PERMIT AND DESIGN REVIEW  
SUBMITTAL

6-21-2016

PROJ NO.  
11208.03

DRAWN

CHECKED  
HTV

DRAWING NO.  
L2





















# Land Use/Planning

- Site located beyond the Urban Limit Line
- VL high intensity (Massing) is inconsistent with surrounding land use (Agriculture and Residential)
- Project contradictory to G.P. Policy 2.6.5 “Continuation of low intensity uses adjacent to ULL”
- PQP requires high level of scrutiny and vetting
- Project feasibility requires granting of several variances
- Potentially significant impact. Not mitigated



# Parking Demand

- VL: 31% (Applicant)(72 cars, 69+3 cars)
- VL: 49% (TIR vehicle count, May 2016)(99 cars)
- VL: 56% (Hinds 48 cars parked 2/15/17 evening)(125 cars)
- Greystone: 70% (TIR)(157 cars)
- Significant discrepancies in parking demand
- Requires variance
- Potentially significant impact. Mitigation measure of five bicycles does not reduce level of impact significance

# Noise

- Study conducted while VL students on break (Spring 2016)
- Study not predicated on all 224 students residing at VL
- “Gatherings could include up to 120 students that live onsite”
- “Student activities not expected to result in noise at property line from 10:00 p.m. to 7:00 a.m.” College students keep late hours
- Study did not consider noise emanating from VL toward two residential building sites located directly across Pratt Ave.
- Potentially significant impact. Not mitigated

# Population/Housing

- Increased VL residents 101 to 224 (Net increase of 123, 122 %)
- Not consistent with surrounding land use and low density development on parcels located beyond ULL
- Expanded student enrollment adds 100 residents to City population. Not accounted for in ABAG residential increase forecast of 400 by 2040.
- Potentially significant impact. Not mitigated

# Traffic

- VL study only considered A.M. and P.M. peak traffic on weekday
- VL student personal car usage not fully considered (72 cars)
- Pratt/ Hwy 29 intersection study utilizing theoretical Las Alcobas driveway traffic. Beringer reported projects not considered
- Park St./Crinella being used as “cut through” to avoid Pratt intersection not considered
- Potentially significant impact. Not mitigated

# Water

- Applicant water usage exceeded allotment in 2014 and 2015
- Baseline existing demand: 23,478 gpd
- Current allotment: 20,650 gpd
- Proposed water demand: 21,667 gpd (Annual adjusted to 19,796 gpd)
- Demand calculations not strictly a function of newer water saving fixtures and volume offsets from Greystone. Frequency and duration of use differential (theoretical to actual) can be significant.
- Past history is often an indicator of future performance
- Water is a finite resource. Enforcement action/penalty for continued volume exceedance?



# Wastewater

- VL current peak daily flow: 6373 gpd
- VL anticipated peak daily flow: 9605 gpd
- Increase in VL peak daily flow: 3232 gpd (51%)
- Regardless of VL onsite treatment, current capacity of Crinella lift station and city treatment plant, would approval be granted for 51% increase in discharge for all users on Crinella system or citywide?
- Wastewater capacity and treatment is a finite resource.

# Summary

- The Vineyard Lodge expansion project should be denied for the following reasons:
- High intensity (Massing) is inconsistent with character of surrounding land use (Agricultural and Residential). Mitigation measure will not adequately reduce visual degradation of site and surroundings.
- Project is located beyond the ULL and is contradictory to G.P. Policy 2.6.5 “Continuation of low intensity uses adjacent to ULL ” and fails compliance on numerous Design Review and Use Permit criteria as found in the Municipal Code
- Potentially significant impacts not sufficiently identified nor mitigated
- Project feasibility requires granting of several unmerited variances

# Summary

- 1993: Use Permit approved the construction of two dormitories and a third, with Permit amendment, at Greystone campus
- 1993: Use Permit required 1:1 room to parking space ratio
- 1993: City Council certified an Environmental Impact Report
- 1993: CIA requested 200 students. City approved maximum limit of 104. Expanded to 200 in 2008.
- 2017: City facing major challenges with economic development with finite resources. Is expanded CIA enrollment in best interest of City? If yes, solution is expand housing at Greystone Campus

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Charles W. Meibeyer  
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February 20, 2017

VIA E-MAIL

Chairperson Kistner;  
Commissioners Monyette,  
Parker, and Knudsen  
St. Helena Planning Commission  
1480 Main Street  
St. Helena, CA 94574

Re: 2555 Main Street and 830 Pratt Avenue

Chairperson Kistner and fellow Commissioners:

On the Culinary Institute of America's ("CIA's") behalf I want to note that we sincerely appreciate the Commission's time and patience in its review of the substantial materials submitted in this matter. We also truly appreciate the efforts of City staff in guiding the applicant toward the preparation of a full and complete application and, in particular, the thorough and capable Staff Report analyzing the various aspects of this project.

The Staff Report's CEQA analysis, particularly the thoughtful responses to the numerous comments that were received, establishes without doubt that there is no basis for a fair argument that any aspect of the project constitutes a significant environmental effect. The report also exhaustively analyzes the requisite Design Review criteria, General Plan consistency, Use Permit findings, and Variance Findings and concludes that findings have been made to approve the project as submitted.

The CIA recognizes that certain neighbors may have concerns about additional development at 830 Pratt Avenue. As we will discuss further at Tuesday's hearing, the CIA made numerous revisions to the project to address concerns raised at a neighborhood meeting in April, and further concerns raised during the Use Permit process, to minimize impacts to the neighborhood, and City of St. Helena resources. At the same time, the CIA also believes that the housing stock in the City of St. Helena is at a critical level, and has determined that it should not only avoid exacerbating that problem by adding additional students without providing on-campus housing, but that it should make every effort to reduce the number of its existing students that occupies homes and apartments in St. Helena. Through this project, the CIA will provide housing for 260 out of its 300 students – and is the only institution, profit or non-profit,

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within the City of St. Helena that provides housing for its students (or employees). As a result, we believe this project is important not only to the CIA, but also to the City of St. Helena.

As noted above, the Staff Report fully responds to comments submitted during the CEQA comment period. Some additional comments regarding CEQA issues were received after the closing of the comment period that were inaccurate and require correction. We also thought it would be beneficial to provide some amplification regarding a few issues in the Staff Report, but believe the Staff Report is an excellent roadmap to Tuesday's discussions.

#### 1. Traffic Issues.

In his submitted comments, Mr. Hinds incorrectly asserts that "The Traffic Impact Report ('TIR') only considers peak A.M. and P.M. shuttle bus trips from Vineyard Lodge to Greystone. The TIR fails to consider the full magnitude of personal trip usage of the 72 permitted cars located at Vineyard Lodge." (R. Hinds Comment Letter p. 8.)

Crane Transportation Group's traffic studies in fact did account for the incremental trips associated with the new students who will reside at the Vineyard Lodge, and determined based on observed trip generation at the Vineyard Lodge driveway that only a small number of additional trips would occur during peak traffic hours in light of the students' class schedules. "There would be a small component of trips added to Pratt Avenue from the Vineyard Lodge (3 inbound trips and 5 outbound AM peak hour trips and 7 inbound and 5 outbound PM peak hour trips) attributable to students with parking permits traveling to and from downtown St. Helena and the surrounding area." (11/2/16 Vineyard Lodge Traffic Study p. 14.) As further explained in the CIA-Greystone Master Plan Traffic Study:

*"Most of the existing traffic activity associated with students living in non-CIA housing off-site occurs at non-peak traffic times (i.e. on weekdays before 7:00 AM, from 1:00 to 2:00 PM or after 8:00 PM), thus, other than shuttles running every 15 minutes between the Vineyard Lodge and Greystone facilities, only low-levels of student-related trips are reflected in project trip generation during the analyzed peak hours. There would be minor trip increases (3 inbound and 5 outbound during the AM peak hour, and 7 inbound and 5 outbound during the PM peak hour) projected to and from the Vineyard Lodge housing, attributable to students with parking permits traveling to and from downtown St. Helena and the surrounding area during after-school hours. The weekday student trip increases are projected at low levels based on the current low-level driveway counts at Vineyard Lodge during the analyzed peak hours." (11/17/16 CIA-Greystone Master Plan Traffic Study p. 17-18 [emphasis added].)*

As shown in Figure 8 of the 11/17/16 Traffic Study (copy attached), these incremental trips would create 4 new left hand turns from Pratt Avenue onto State Route 29. The MND's analysis takes these additional trips into account at the Pratt Avenue/SR HWY 29 WB intersection, and determined that impacts would be less than significant: "[T]he addition of four (4) trips would further degrade the LOS under the AM and PM peak hours. Given the degraded LOS under

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Baseline conditions, a warrant analysis was undertaken. *Under baseline conditions with and without the project, the intersections would not meet warrant thresholds. Given that the project would not degrade the LOS to the next lowest level at any of the study intersections impacts would be less than significant.*" (MND p. 51.)

## 2. Noise Issues.

Mr. Hinds also makes a number of incorrect assertions regarding the Noise Study conducted by ICF International, which the MND relies upon to conclude that there are no significant noise impacts under CEQA.

As stated in the City's Response to Comments Response Number 5-2, ICF analyzed baseline noise levels between April 29<sup>th</sup> and May 4<sup>th</sup>, 2016. The students were on break and not attending classes from April 29 until May 2<sup>nd</sup>, but began arriving back to campus that day and were on-site during the balance of the monitoring period. As a result, the baseline noise levels during the initial portion of the monitoring period (when no students were on campus) provide the most conservative method for evaluating project noise impacts associated with an incremental increase in operational noise. ICF accounted for the marginal increase in vehicle trips on Pratt Avenue attributable to the project, and determined that the increase in traffic noise would be well below the threshold of a perceptible change.

Further, given the students' schedules, it is reasonable to assume there would at most be a gathering of a maximum of 120 students (a bit more than 50% of the total students) in that area, which will be enclosed by buildings which provide almost a solid barrier preventing noise from being directed toward neighbors along and across Pratt Avenue. As stated in the ICF report and the MND, the resulting sound level from 120 students talking at once at a quad gathering would be about 42 dBA at the closest existing residence, well below the measured daytime ambient sound levels of 50 to 64 dBA. The rules prohibiting amplified music, imposing noise curfew hours, and restrictions on non-residents accessing the property are in the student handbook and are enforced pursuant to the CIA's student code of conduct, and will continue to be enforced. As stated in the Response to Comments Response 6-2, there were only six calls associated with Vineyard Lodge housing placed to the St. Helena Police Department in 2016, none of which report student noise violations, although three pertained to fire and other alarms. Moreover, during this time period without any noise complaints, the existing dormitory buildings provided essentially no noise buffer toward Pratt Avenue neighbors due to the existence of the large, flat paved parking area along most of the Pratt Avenue frontage.

## 3. Parking Issues.

While the staff initially determined a Variance from the parking requirements was required for the project, the applicant has concluded that a variance should not be required for a college dormitory project because parking requirements for such facilities are dramatically less than are suggested for this project. We reach this conclusion because the Municipal Code ("Code") does



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not specifically specify the parking requirements for this project because student dormitories are not specifically listed as a residential parking category under Code Section 17.124.030.A. For such unlisted uses, Code Section 17.124.030.H provides that "[t]he planning commission shall determine the parking requirements for uses not specifically listed. In determining such requirements, the planning commission shall use the above requirements as a general rule and guide."

The CIA's student dormitories are dissimilar from the limited residential categories listed in that Code section. The Planning Department assumed that the rooming/boarding/lodging house requirement of one space per guest room, and two spaces for the resident owner, should apply to the student dormitories. But, in the definitions section of the Code's zoning title, dormitories are listed separately from lodging and rooming houses within the broad "hotel" definition. (Code § 17.04.160.) The Code parking requirements recognize that rooming/boarding/lodging houses have distinct features from typical hotels -- even though they are technically a subset of the "hotel" definition in the Code -- and impose a unique, tailored parking requirement for rooming/boarding/lodging houses based on those distinct features (including the typical on-site owner's unit). Because student dormitories are an unlisted use in Code Section 17.124.030, dramatically dissimilar from the listed residential uses, the Planning Commission is authorized to make a project-specific parking determination, using listed use parking requirements as a general rule and guide. We believe the dormitories require an entirely different parking scheme than is applicable to rooming/boarding/lodging houses.

Included with the submittals is the February 2017 Crane Transportation Parking Memo. In that report, Crane concluded that parking opportunities for college students are consistently extremely restricted by those institutions. For example, at UC Davis, students residing in residence halls are not allowed to bring automobiles to campus. At College of Notre Dame de Namur first year students are not allowed to bring automobiles and are expected to utilize public transportation. Crane noted that, nationwide average parking supplies for urban 4-year college sites are 0.3 spaces per total number of students, faculty and staff ("school population") in urban sites, and 0.4 spaces per school population at suburban sites. But, as noted by Crane, 4-year college sites with a mix of classrooms, halls, offices, and student housing are quite different from the proposed student dormitory-only site. Rather, the CIA's student dormitory project shares similar transportation demand management features with other California campuses, including shuttle service and strict on-campus parking permit restrictions. Accordingly, the Crane Transportation Memo concludes that the CIA's program "is highly supportive of students not requiring personal vehicles to travel to and from campus."

Given that students will not require personal vehicles for travel to and from the Greystone Campus, a parking requirement of one space per guest room would require excessive parking not in line with campus parking policies at the CIA or other California colleges. Students with high quality alternative transportation options will display markedly different travel patterns and parking demand compared to guests at rooming/boarding/lodging houses or hotels, who rely on private automobiles for the vast majority of their daily trips. The proposed 0.31 spaces per



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student dormitory bed requirement is in line with national average parking supplies for comprehensive campuses. In the project's unique circumstances, this requirement actually provides more student parking than is typical, given that the national averages of 0.3 to 0.4 parking spaces per school population include faculty and staff members far more likely than students to need access to their own private automobiles for commuting. In addition, the proposed 0.31 spaces per room requirement is a similar ratio to an existing residential use listed in the Code's parking section: rest homes, convalescent hospitals, residential care and similar group care facilities, which are required to provide only 0.25 spaces per bed.

The Crane Transportation Memo provides substantial evidence establishing that the Planning Commission should use its independent judgment, as authorized by the Code, to impose a specific parking requirement for a residential land use not otherwise existing in St. Helena. The project proposes 72 parking spaces for its 224 dormitory beds, three of which will be on-demand car rental spaces, exceeding the proposed 0.31 spaces per dormitory bed requirement.

Should the Commission determine, however, that the boarding/lodging/ guest house parking standard does apply, the findings regarding the Parking Variance establish the Variance should be granted.

#### 4. Setback Issues.

As discussed in the Variance findings, the Vineyard Lodge property is the ONLY property on Pratt Avenue east of the railroad tracks where the special 36' setback applies (other than the Beringer vineyard next door that is part of a large parcel that wraps around to Main Street and will never develop structures instead of critical vineyards) that has made a dedication to the City for the full potential width of Pratt Avenue as a collector road. If the City determined at a later date that it needed to expand Pratt Avenue as a collector road it would have to condemn 10' to 20' along Pratt Avenue from all of the rest of the property owners on the northerly side of Pratt Avenue because none of those properties are able to be subdivided which would otherwise trigger the requirement of a free road dedication by the property owner. Moreover, the Pratt Avenue bridge is very narrow, and is intersects Silverado Trail along a blind curve where traffic from the north is traveling at 55 mph or more. As a result, it seems there is a very low/remote likelihood that Pratt Avenue will ever be widened in this area. As such, the proposed buildings will continue to be located 41 feet from the right of way along Pratt Avenue.

In any event, the Variance does not impede the City from constructing a wider roadway along Pratt Avenue because the room for that road widening already exists in the expanded roadway section along a portion of the Vineyard Lodge frontage, and the buildings will be approximately 15' further away from Pratt Avenue than the existing VL 1. Given these practical circumstances, and the fact that the Variance findings are compelling, the Variance should be granted.

#### 5. Aesthetics Issues.

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The project was subjected to a rigorous Visual Impact Assessment ("VIA"). the Staff Report at page 10 of 26: "It is worth noting that this BLM [Bureau of Land Management] methodology is the most technical visual impact analysis familiar to staff"). Because the MND only references a limited portion of the VIA a copy is attached for the Commissioners' reference to highlight the object criteria addressed in that report. The VIA focused on the required aesthetics impact areas under CEQA: (1) Would the project have a **substantial adverse effect** on a scenic vista; and (2) would the project **substantially degrade** the existing visual character or quality of the site and its surroundings? After a thorough analysis the report concluded that neither of those adverse effects will result from the project. While views from Pratt Avenue will be different, the key views of the hills and mountains are preserved. Moreover, a change to a neighbor's view may be disappointing or frustrating, but that does not in and of itself create a substantial adverse effect on a scenic vista, or a substantial degradation of the existing visual character/quality of the site and surroundings.

One Commenter disputed the result of the VIA because it was conducted during the summer months when the deciduous Sycamore trees were full of leaves. In response, the author of the VIA has commented as follows: "The Visual Impact Assessment (VIA) for 830 Pratt Avenue took into account the existing physical qualities and characteristics of the surrounding environment including those of existing landscape materials immediately adjacent to the project site along Pratt Avenue."

"The deciduous nature of the existing surrounding landscape was considered when assessing the impacts of the proposed project. Existing and proposed trees and landscape plantings within the project site and additional trees along the right of way in lieu of driveway entrances were taken into account when making the findings."

We further believe it is important to note that this property is effectively an "infill project" that has been in commercial operation for over fifty (50) years; has had no agricultural activity during that time period, and is not a size that lends itself to economically viable agricultural activity - the findings that were made for the property's rezoning to Public: Quasi-Public in 2008. Moreover, the property is bounded on the west by the large Treasury wine storage facility, and to the east and north by sewage treatment ponds. An important feature of the property is its existing, very mature trees on the southwest corner and the easterly border along the Vineyard Road. In addition, as can be seen from the Landscape Plan, twenty eight (28) larger 24" boxed trees will be planted on the property perimeter along with the relocation of 6 mature fruitless Mulberry trees, provided ample screening (while the Sycamore trees are deciduous, they are very large and mature, and provide substantial screening the vast majority of the year, and still provide some visual filtering during a short period in the winter). And, as specified on project plans, the three story sections of the building improvements are located approximately 152 feet from Pratt Avenue, resulting in two story structures entirely along Pratt Avenue, and for a significant distance along the easterly border of the property. In addition, as noted previously, the current VL1 is located approximately 5' from the City's public easement along Pratt Avenue. The

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project enhances aesthetic values by moving the buildings approximately 15' further from Pratt Avenue, and continuing to locate a substantial portion of the Pratt Avenue improvements behind the existing camphor trees.

While the project does not meet the technical requirements of SB 743, the Legislature has exempted "infill projects" from both parking and aesthetic analysis under CEQA to ensure that transit-oriented infill projects are free of CEQA obstacles that would otherwise delay or preclude projects that provide important Greenhouse Gas Reduction and traffic reduction measures. Given the CIA's commitment to minimize traffic through its shuttle operation, and the development of a bike path along Pratt Avenue at a cost of \$130,000, the CIA's project meets the underlying goals of those important policies.

We look forward to discussing these and other issues with you on Tuesday.

Very truly yours,

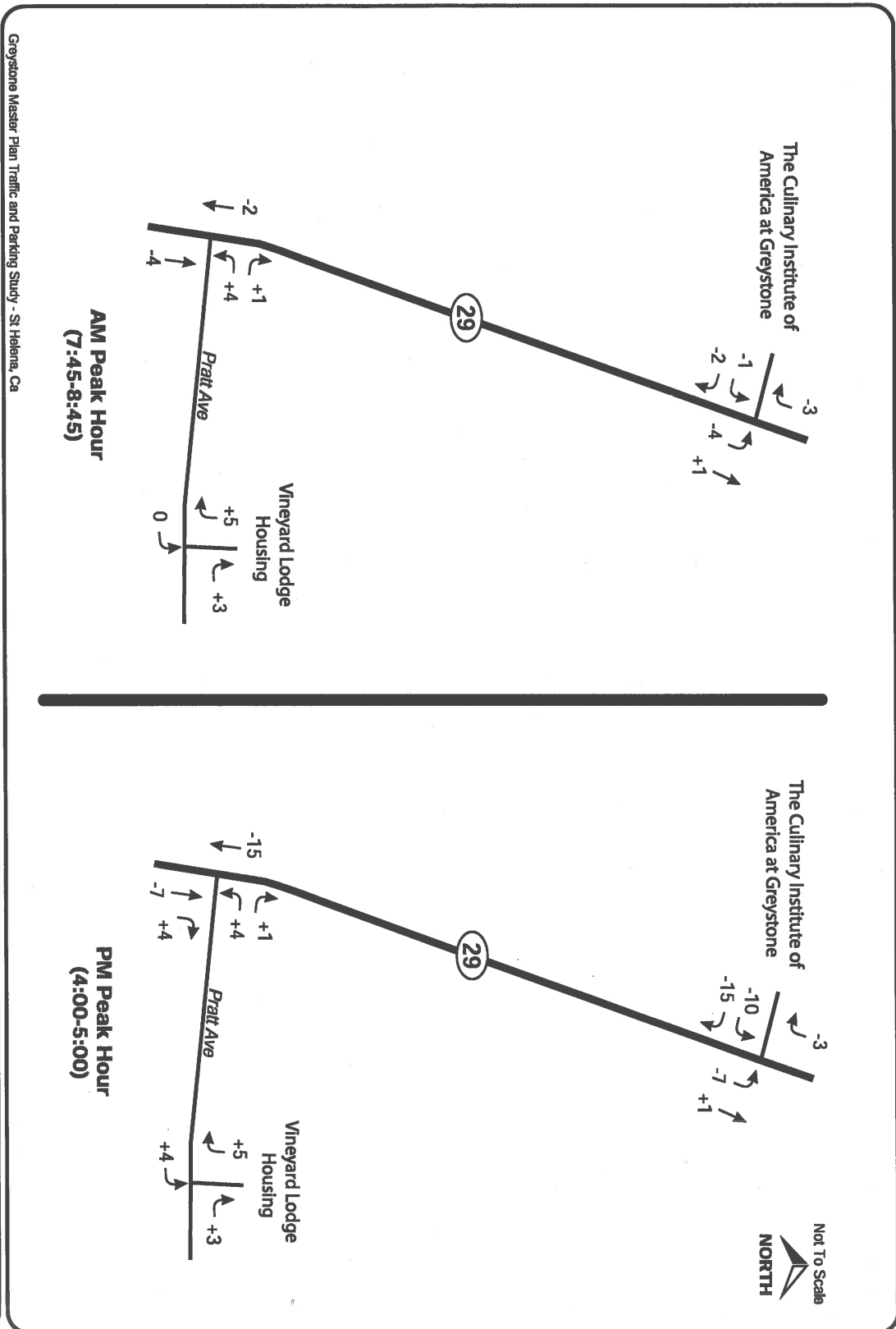


Charles W. Meibeyer

Enclosures

cc: St. Helena Planning  
Brian Russell

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**Figure 8**  
**Project Increment**  
**AM & PM Peak Hour Volumes**

CRANE TRANSPORTATION GROUP

Donna Hinds  
777 Pratt Avenue  
St. Helena, CA 94574

VIA E-MAIL

February 20, 2017

Chairperson Kistner,  
Commissioners Monnette,  
Parker and Knudsen

Re: Response to Letter of Charles W. Meibeyer, dated February 20, 2017

Chairperson Kisner and Commissioners:

This response is to the letter of Charles W. Meibeyer, dated February 20, 2017. While not addressing all of the statements and discussions set forth in the letter, there are a few discussions that merit a response.

Mr. Meibeyer states in the third paragraph of page 1: "The CIA also believes that the housing stock in the City of St. Helena is at a critical level, and has determined that **it should not only avoid exacerbating that problem by adding additional students without providing on-campus housing**, but that it should make every effort to reduce the number of its existing students that occupies homes and apartments in St. Helena." This statement seems to assume that the CIA will be allowed to add the additional students and that by providing for dormitories the CIA is doing the City a favor. The City does not have to allow the additional 100 students. This is the number of additional students the Applicant has requested. If the CIA cannot demonstrate that they can provide adequate housing that meets design review standards and that will not place undue impacts, burdens and hardships on the City, the CIA should not be allowed to add the requested additional students. If the real goal of the CIA is to "reduce the number of its existing students that occupies homes and apartments in St. Helena," then why does the proposal only make a reduction from 52 outside students to 29 outside students? This is less than a 50% reduction, while they are asking for 100 more students. It would be reasonable for the Planning Commission to make a determination that having a Culinary School limited to 200 students is appropriate in light

of the fact that St. Helena is a small town with limited resources and there may be other projects that would provide more benefits to the City.

#### CIA Community Meeting:

The letter raises the issue of the community meeting. There are some misleading statements related to the community meeting resulting from the fact that the Applicant did not provide specific facts of the project at the meeting. No site plans were provided. No dimensions were provided. I specifically asked, "How far is Building B set back from Pratt Ave?" The answer given by Tom Bensele was "I do not know for sure, we are currently working on that issue." I responded, "Due to the large size of the building it should be set far back from Pratt Ave." When it was revealed at the meeting that the building was two story, I suggested that any buildings fronting on Pratt Ave. should be one story and have a large setback. There was no mention that some of the buildings would be three story or in excess of 40' tall. The CIA may have made revisions in their plans after the community meeting, but these revisions did not address the concerns of the neighbors. The CIA takes pride in stating that they revised their plans to move Building B from a 5' setback to a 20' setback. Was the original 5' setback of a building that is 150' long and 36' high<sup>1</sup> realistic? Additionally, the CIA never called a second meeting of neighbors to show them the actual plans with specifics that were going to be submitted to the City, so that the neighbors could have meaningful input. The CIA seems to put great weight on the fact that they made some revisions to the plans after the community meeting. Based on the massing of the actual plans submitted, it is hard to imagine this is a downsizing from the original plans. The statements in Mr. Meibeyer's letter seem to discount the concerns of the neighbors. At the bottom of Page 6 of his letter, Mr. Meibeyer states: "The project enhances aesthetic values by moving the building approximately 15' further from Pratt Ave, (than VL1) and continuing to locate a substantial portion of the Pratt Avenue improvements behind the existing camphor trees." VL1 (the former Marlinda building) is a one story building with the smallest widths of the building fronting on Pratt. Building B is 150' long, 36' high and is proposed to have a 20' setback. It is hard to believe one could state that Building B "enhances aesthetic values" as stated by Mr. Meibeyer. Additionally, on P. 6 of Meibeyer's letter he states: "Moreover, the property is bounded on the west by the large Treasury wine storage facility, and to the east and north by sewage treatment ponds." This statement is misleading in its characterization of the surrounding

properties. A simply drive-by will confirm this. The Treasury building is set very far back from Pratt Ave. (as large buildings such as this should be) and the property is surrounded by vineyards on the east. The sewage treatment ponds referenced by Mr. Meibeyer are also set back very far from Pratt Ave and cannot be seen from the road. There are also vineyards across the street to the south that were not mentioned. The applicant has stated that they will discuss this topic of the revisions they made after the community meeting further at Tuesday night's meeting. While meaningful community input would have been appreciated, there are many items to discuss at the meeting on Tuesday and the focus now should be on the project that has been proposed. A discussion of what they started with and revised it down to is self-serving and meaningless. There are real concerns related to the project, as proposed. This is where the focus should be.

#### Parking Issues:

The Applicant has requested a variance for parking and has presumably filed an Application seeking a parking variance. Now, one day prior to the Planning Commission meeting, Mr. Meibeyer is taking the position that a parking variance is not required. Section 17.124.030 sets forth the parking required for various types of Residential projects. Although the provision for rooming, boarding or lodging has historically been applied to the subject site (bottom of P. 6 of Staff Report), Mr. Meibeyer has pointed out that "dormitories" come within the Code definition of "Hotel" in Section 17.04.160. There is only a difference of one parking space between the two applicable provisions. Since "dormitories" are listed under the definition of Hotel, the proposed project should be required to have the parking spaces required by Section 17.124.030 A. 3. applicable to hotels, which provides for "one space for each individual guest room, suite, or sleeping or living unit." While the Code drafters did separate the provision applicable to "Rooming, boarding, or lodging houses" they did not provide for a separate provision for dormitories. The fact that "rooming, boarding, and lodging houses" were provided for separately does not somehow remove "dormitories" from the code definition of "Hotel." The Applicant is required to have 173 parking spaces and is required to seek a variance if it wants reduced parking. Mr. Meibeyer discusses parking situations at other campuses in an effort to say that the Applicant should not be required to seek a variance. The proposed dormitory is different from the other campuses named in many respects and the parking needs/demands of



those campuses cannot be determinative of parking needs for the proposed project. The Planning Commission should look to the provisions clearly set forth in our Code that were designed to provide for the purposes set forth in Section 17.04.020 including the public health, safety, general welfare, orderly uses of land, etc. Mr. Meibeyer has also stated that the parking demand for students at the Vineyard Lodge is .31 spaces per student. As stated in the Greystone Traffic Impact Report, the parking demand for students at Greystone is .70. How is this discrepancy explained? The Vineyard Lodge currently has 85 parking spaces with 101 students. While the Applicant states the demand is only .31, this has not been tested since the Vineyard Lodge Traffic Impact Report reflects a ratio of .44 and citizen parking counts prove in excess of .56. There are many occasions when this parking lot is full or nearly full, and clearly exceeds the .31 ratio requested by applicant. I have spent more time discussing the parking issue in a separate paper that specifically discusses variances. (Pratt Avenue Dorm Proposal Variance Discussion)

Setback issues:

This topic has been addressed fully in my submittal entitled Pratt Avenue Dorm Proposal Variance Discussion and will not be repeated here. Section 17.112.050 (adopted in 1994) requires a 36' setback on Applicants property that is measured from the Property Line. The building in question is 36' high and 150' long. Does the City really want a building this large to have a setback of only 20'?

Thank you, sincerely for your time and consideration of these very important issues.

Warm regards,

Donna Hinds

cc: St. Helena Planning  
Brian Russell

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<sup>1</sup> While Building B is described as a 29'2" building, when measured pursuant to normal architectural practices, the building is 36' high.

**PRATT AVENUE DORM PROPOSAL  
VARIANCE DISCUSSION  
SUBMITTED BY DONNA HINDS  
February 20, 2017**

This supplemental paper is to specifically address the variances requests made by Applicant and to discuss additional areas that require a variance request.

**PRATT AVE. SETBACK VARIANCE:**

In support of their request for a setback variance, the Applicant presents a very circuitous discussion on the interpretation of the special setback for Pratt Ave. (Section 17.112.050). The special setback provision is actually very clear. It states:

A. Front Yard or Setback on Pratt Avenue. A front yard or setback of thirty-six (36) feet shall be required on the northwesterly side of Pratt Avenue from the Southern Pacific Railroad tracks to the Napa River, and a front yard or setback of twenty-four (24) feet shall be required on the southeasterly side of Pratt Avenue from the Southern Pacific Railroad tracks to the Napa River.

The Applicant seems to be unclear as to how to measure the special setback required by this provision. The Applicant looks to a provision in the A-20 Zoning and to a parcel map that was recorded in 1971 to assist in “interpreting” the special Pratt Ave setback provision, and concludes that the setback is determined by measuring from the centerline of Pratt Ave.

It is not necessary, or appropriate, for the Applicant to look to other provisions, or maps, to aid in interpreting Section 17.112.050. The section is very clear, as written, and, therefore, is not subject to the interpretations advocated by the Applicant. Section 17.112.050 provides: “A front yard or setback of thirty-six (36) feet shall be required...” The meaning of “setback” is set forth in Section 17.04.160 B. as follows: “**Setback**’ means the distance by which any use, building or structure is required to be removed **from a property line** contiguous to a public or private right-of-way (excluding alleys), except for such encroachments as are specifically permitted by this title.” “**Front Setback**” is also defined as follows: “Front setback means the shortest **horizontal distance by which any use, building or structure is required to be removed from the front lot line**, except for such encroachments as are specifically permitted by this title.” These definitions of “setback” make it extremely clear that, unless specified otherwise, Code references to “setback” mean a distance measured from the front lot line. To add even more clarity to this provision, Section 17.112.050 A. uses the term “Front Yard” in reference to the special Pratt Ave. setback. “Yard” as defined in section 17.04.160 B. “means an open space established in relation to **interior lot lines** which is required under the provisions of this title, other than a court, on the same lot with a building, which open space shall be **unoccupied and unobstructed from the ground to the sky**, except for such encroachments as are specifically permitted in this title. It is most interesting to note that Section 17.112.050 specifically includes the term “front

yard” with respect to the Pratt Ave. setback but does not reference “front yard” for the other streets named in the same section that require special setbacks. This makes it abundantly clear that the intention of the special Pratt Ave. set back is to not only provide that future buildings would be placed 36’ back from Pratt Ave. but to further emphasize that there be a “front yard” that is “unobstructed from the ground to the sky.” Since Pratt Ave. is defined as a “Collector Street” in the General Plan, it seems evident that the drafters of the special setback on Pratt Ave were insuring that any future construction leave a 36’ area clear for possible future road expansion. The Applicant’s request for a setback variance for Building B (which is 150’ wide and 36’ high) on Pratt Ave should be denied. It is a common zoning principle that the larger the building, the greater the setback. It is appalling that the Applicant is seeking to place this massive building closer than the required setback.

The Applicant lists six (6) houses on Pratt Ave and has analyzed their respective setbacks BY USING GOOGLE EARTH. These houses were all approved and built prior to the 1993 General Plan and prior to Section 17.112.050. The purpose of Section 17.112.050 (1994) was to prohibit any new building encroachments into the special 36’ setback. It did not apply retroactively. The Applicant also points out that the existing Marlinda facility, that it is proposing to demolish, has a 7 foot setback from the property line. Again, this building was constructed in the 1960’s, prior to the applicability of Section 17.112.050.

The Applicant looked to the A-20 zoning provisions to assist in the interpretation of the Pratt Ave. setback provision. While looking to the A-20 zoning was not necessary, on the issue of the setback variance, due to the clarity of the Pratt Ave. setback provision; I do appreciate the Applicant’s understanding that in cases where there is not clarity, it is appropriate to look to the adjacent A-20 zoning. For example, the PQP does not set forth specific setbacks, FARs, etc. For these areas where the PQP is vague, it is helpful to look to the adjacent A-20 zoning for assistance with interpretations.

To approve the setback variance, the Planning Commission must find that:

A. A hardship peculiar to the property, not created by any act of the owner, exists. In this context, personal, family or financial difficulties, loss of prospective profits, neighboring violations, are not hardships justifying a variance.

**HINDS RESPONSE:** As set forth previously, the special setback for Pratt Ave. is very clear and not open to the interpretation of Applicant. The subject property is subject to a 36’ setback measured from the front property line. The neighboring properties on Pratt Ave. were not subject to this special setback as they were all built prior to the adoption of the current Section 17.112.050. (which appears to have been in 1994). The need for the variance is not related to the triangle shape of the property. The portion of the property that Applicant seeks to build on is the remaining portion of the property that is not impacted by the irregularity which has been previously addressed by the construction of Vineyard Lodge II.

**The need for the variance is solely created by the desire of the Applicant to place more buildings on the property than reasonably fit.**

B. The Variance is necessary for the preservation and enjoyment of substantial property rights of the Applicant which are possessed by other properties in the same district and in the same vicinity; and that a Variance, if granted, would not constitute a special privilege of the recipient not enjoyed by his or her neighbors.

**HINDS RESPONSE:** The requested Variance is not necessary for the preservation and enjoyment of the substantial property rights of the Applicant. The Applicant was granted a zoning change in 2008 from A-20 to PQP to enable the construction of the 12,612 square foot Vineyard Lodge II dormitory on the property. This zoning change enabled a much greater use of the Applicant's property than the surrounding neighbors and, in fact, impacted the surrounding neighbors. The Applicant now wants more.

C. The authorization of the Variance will not be of substantial detriment to adjacent properties, and will not materially impair the purpose and intent of this Chapter or the public interest, nor adversely affect the General Plan.

**HINDS RESPONSE:** Approval of a Variance that will allow construction of Building B, which is 150' long and 36' high (when measured to top of gables)\*, to be setback only 20' from the property line will be "of substantial detriment to adjacent properties." A general planning principle is that the larger the building, the bigger the setback. The proposed building is enormous and out of character with Pratt Ave. The authorization of the Variance is in direct conflict with the General Plan. Pratt Ave is defined as a "Collector Street". The General Plan recognizes the need to preserve rights-of-way for Collector Streets. \*Building B is described throughout the City and Applicant documents as 29'2". This building is actually 36' high when properly measured to the top of the gables that run the width of the building.

D. The condition or situation of the specific piece of property for which the Variance is sought is not so general or recurrent in nature as to make reasonably practicable the formulation of a general regulation for such condition or situation

**HINDS RESPONSE:** The Variance requested by the Applicant is not the result of "the condition or situation of the specific property" in that the reason for the requested variance is that the Applicant is trying to place more buildings, and more people on the property than actually fit.

E. The Variance and any buildings or structures permitted by the Variance will not be detrimental to the public health, safety and welfare of the community.

**HINDS RESPONSE:** The Variance, if allowed, will result in buildings or structures that will be detrimental to the public health, safety and welfare of the community

in that they will increase traffic, noise, and will create significant, unmitigated negative visual impacts. Additionally, there are concerns that the 16' access road will not provide sufficient passage for both firefighting trucks and the timely exit of people from the buildings in the event of fire.

#### **PARKING VARIANCE:**

The Applicant is requesting a variance to reduce required parking spaces from 175 spaces required by Code to 72 spaces; **This is 103 parking spaces less than the Code requires.** Of the 72 spaces, 3 will be used for rental cars, leaving 69 available spaces for students and the residential staff for these buildings. Restated, less than 69 students (out of 224 total) will be allowed to have cars (including 4 spaces for disabled parking). Since **155 students will not be allowed to have cars at the Vineyard Lodge**, and an allowance of only three rental cars available for these 155 students to share, the variance request is unreasonable. While Applicant states that this variance request is based on actual demand of the existing students, actual parked car counts indicate that many more students are parking at Vineyard Lodge than actually have permits. There have been several occasions during the last several months when parking counts (performed by Hinds) have far exceeded the 31% demand proposed by Applicant. The variance request is not based on the demand of the students, but rather, is based on the number of spaces the Applicant can fit on the property after designing three (four) very large dorm buildings. This is an artificial number created by the Applicant. These students are not comparable to residents of an elderly care facility. They are college students. These are young, healthy, **social** people who have drivers licenses and will be coming and going from the project at all hours of the day and late night. These students, in the words of the Applicant, will be “urged” not to bring cars with them to school. Many of these students likely already own cars that they will be “urged” to leave behind. This is not a fair request. This unreasonable request upon these young college students will result in the temptation of many students to bring their cars and park in locations throughout our town. They could have other students drop them off or ride their bikes to their cars. Where will they park these cars? At the rental homes of the 29 off-campus students? Along Pratt Ave.? In the Crinella subdivision? In the parking lots of other businesses? This is an unintended consequence that the Planning Commission should strive to avoid by not allowing a parking variance. (As a side note, the traffic study failed to consider the potential use of cars brought by students and parked off-campus).

To approve a parking variance, the Planning Commission must find that:

A. A hardship peculiar to the property, not created by any act of the owner, exists. In this context, personal, family or financial difficulties, loss of prospective profits, neighboring violations, are not hardships justifying a variance.

**HINDS RESPONSE:** There is no hardship that is peculiar to this property. The facts are compelling. The Applicant is proposing to increase the number of students by 123 and at the same time is proposing to reduce the number of

parking places by 13. The Applicant is requesting a total of 72 parking spaces for 224 students. The code requires 175 spaces. The Applicant is seeking a variance that would enable them to have 103 spaces less than required by code. The Planning Commission should not allow a Variance that creates a building with insufficient parking. A building that houses 224 people clearly requires more than 72 parking places. The Applicant has chosen to fill property with buildings at the expense of providing for adequate parking and now seeks a variance. This variance should be denied.

B. The Variance is necessary for the preservation and enjoyment of substantial property rights of the Applicant which are possessed by other properties in the same district and in the same vicinity; and that a Variance, if granted, would not constitute a special privilege of the recipient not enjoyed by his or her neighbors.

**HINDS RESPONSE:** The requested Variance is not necessary for the preservation and enjoyment of substantial property rights of the Applicant which are possessed by other properties in the same district in the same vicinity. Currently, the Applicant has some very large buildings on the Property and has sufficient parking to meet those needs. Granting the Variance would constitute a special privilege to Applicant by allowing the Applicant to build out its property without providing sufficient parking. All of the surrounding properties have sufficient parking to meet the needs of their residents.

C. The authorization of the Variance will not be of substantial detriment to adjacent properties, and will not materially impair the purpose and intent of this Chapter or the public interest, nor adversely affect the General Plan.

**HINDS RESPONSE:** The authorization of the Variance will be of substantial detriment to the adjacent properties. The granting of this Variance will result in overflow parking along Pratt Ave. and along the frontage of neighboring homes which is detrimental to the agricultural/country feel of Pratt Ave. Based on letters submitted in response to this project, this has been a problem with the current parking.

D. The condition or situation of the specific piece of property for which the Variance is sought is not so general or recurrent in nature as to make reasonably practicable the formulation of a general regulation for such condition or situation

**HINDS RESPONSE:** The Variance requested by the Applicant is not the result of “the condition or situation of the specific property” in that the reason for the requested variance is that the Applicant is trying to place more buildings, and more people on the property than actually fit, to the detriment of providing adequate parking.

E. The Variance and any buildings or structures permitted by the Variance will not be detrimental to the public health, safety and welfare of the community.



**RESPONSE:** The Variance, if allowed, will result in buildings or structures that will be detrimental to the public health, safety and welfare of the community in that it will increase parking along Pratt Ave. and will detrimentally impact the safety along Pratt Ave. for pedestrians and cyclists.

#### **ACCESS ROAD:**

The proposed project has a 16' wide access road, as opposed to the 30' wide access road required by Section 17.124.070.B.2.e. Section 17.124.010 states "**access shall be in accordance with the requirements set forth in this chapter.**" The language of this provision is mandatory in nature, such that failure to meet the requirements can only be allowed by variance. Section 17.124.070 B. 1. provides that *"An access drive is a way located outside of the public right-of-way that provides vehicular access between the public street and the required parking for more than one lot, or for one lot if the length of the drive is greater than one hundred (100) feet."* The access drive in the Applicant's plans is greater than 100'. Section 17.124.070 B. 2. e. provides the following widths are the minimums that will allow for the safe passage of emergency vehicles. According to this Code Section, for residential developments having over 60 units, the minimum width (including two 2' shoulders) is 30'. Since the access roads for the proposed plans do not meet the minimum Code requirement for width, a variance is required. Width of access roads are provided as minimums for safety of residents and should be strictly enforced. A reduction in the size of the access roads, contrary to the Code provisions, could result in future liabilities for the City. A variance is also required for the access road in that it does not provide for two-way traffic. 17.124.070 B.2.e requires two-way access drives for residential housing over 60 units. The Planning Commission should find that a variance is required as it relates to the access road both for width and failure to provide for two-way traffic. Since Applicant has failed to file an Application for Variance as it relates to its access road, a Variance cannot be granted and the project must be denied.

#### **IMPACTS OF INSUFFICIENT PARKING COMBINED WITH INSUFFICIENT ACCESS ROAD:**

The Planning Commission should deny the requested parking variance and the project since the access road does not meet the 30' widths required by the zoning code. The combination of inadequate parking and an access road that is not wide enough will result in compounded impacts due to the design of the parking being along the access road. There are many situations when the parking will clearly not be sufficient to meet demand. Here are some examples:

1. Move-in and move-out days: For any of you parents who have taken your college students to dormitories, move-in and move-out days result in extremely high demands on parking spaces (even for colleges with ample parking) . These students will not be using rental cars or bicycles to move in and out. The majority of students (who are not allowed to bring their own cars) will have parents/friends bringing them in cars full of their personal belongings, bedding, clothing and

other items that they will want to have in their dorm rooms. The requested variance does not provide for this and other similar situations.

2. Visitors: These students are not comparable to residents of an elderly care facility. They are college students. These are young, healthy, **social** people who will be coming and going from the project at all hours of the day and late night. Bicycles will not provide for transportation at night or for social events outside St. Helena. Only 69 students will be allowed to have cars (including 4 spaces for disabled parking). Since 155 students will not be allowed to have cars, and since there will only be three rental cars available for the 155 cars to share, it is likely that many of these students will rely on friends outside the dorms to pick them up for social outings, work, etc. They may also have friends come to visit. They may call Uber drivers. They may have dates picking them up. The parking places are designed along the access road such that the cars have to back out into the access road to pull out of their parking places. This is a recipe for disaster. The visiting cars will show up and if the student is not outside waiting or is running late, there will be no place to park. While parking on the access road will likely be prohibited, the failure to provide for adequate parking will not leave many options for the visiting vehicles and will likely result in a pattern of illegal access road parking. The natural tendency will be to wait in the access road for the students to come out. There may be situations where students park temporarily in the access road as they make a “quick trip” to drop off an item for a friend or to see something in their dorm. The point here is that insufficient parking could foreseeable result in situations where students illegally park on the access road. Since the access road is not sufficiently wide, this creates safety concerns for emergency situations when a fire truck or ambulance is necessary at one of the buildings and is not able to go around cars parked illegally in the access road. Due to the large size of the buildings and the fact that they will be housing 224 people, access roads are required to be 30’ wide, at a minimum.

3. Students in Outside Housing. There will still be 29 students remaining in outside housing (conflicting numbers in submittals by Applicant). The majority (85%, TIR) of these students have cars. Some of these students currently park at Vineyard Lodge and shuttle to the Greystone campus. Where will these students park under the proposed project? The students, who reside in outside housing, will very likely be socializing with the students living in the dorms. They will be visiting the students at the dorms and will be giving them rides. Again, this will compound the issues discussed in the prior paragraph.

## **GROWTH MANAGEMENT**

The Staff Report dated February 21, 2017 discussed Growth Management on Page 23. The report states: *The category of “dormitories” is not explicitly referenced in the GMS and given that the dormitory use is not a residential development with units available to the open market and the proposed rooms are only available to students attending the*

*CIA culinary program, it is determined that the GMS does not apply to the proposed project. Further, the dormitories serve as temporary student housing and would not be expected to induce growth of permanent residents.*

**HINDS RESPONSE.** The GMS clearly applies to this project. The Code is sufficiently clear and, therefore, does not lend itself to the interpretation set forth above. Section 17.152.020 states: *No building permit for a new resident shall be issued except in conformance with this chapter.* This provides for a broad application of the provision that applies to all residential projects. The provision then clearly sets forth specific development categories that are exempt from the provision in Section 17.152.040, as follows:

**17.152.040 Exempted and regulated development categories.**

A. Exempted Development Categories. This chapter shall not apply to the issuance of building permits for the following projects:

1. Industrial;
2. Commercial;
3. Commercial/residential (daily rental);
4. Replacement housing (on the same site as a preexisting unit which has been removed, demolished or burned within the immediately preceding two years) but not in conjunction with subsection (A)(5) of this section;
5. Relocation of units already existing in the city;
6. Additions, renovations and refurbishment of existing dwelling units;
7. Accessory buildings of any type (except dwelling units);
8. Guest cottages (detached bedroom(s) without kitchen facilities);
9. Second units as defined in Section 17.04.160 and regulated by Section 17.116.030;
10. Affordable Housing. Affordable units are those dwelling units which are required to be rented at affordable rents or purchased at an affordable sales price, consistent with Chapter 17.146. The number of affordable housing units constructed shall be determined by the city council at the time of review of the development agreement authorizing the units. The agreement shall contain guarantees that the dwelling units would continue to be affordable to persons of very low, low, or moderate income for an agreed upon period of time.

The proposed dormitory buildings clearly do not fall into any of the exempted categories listed above. If Applicant wants to be exempted from this project, it should be required to state which exemption from Section 17.152.040 applies to their project. The argument that the GMS does not apply to this project since the dormitories serve as temporary student housing is faulty. If the Code was not intended to apply to situations of “temporary housing”, then it would not have specifically provided for exemption 3., which exempts commercial/residential (daily rental). The proposed dormitories will, in fact, add 100 additional residents to our community. While the students may be temporary (in that they will likely leave St. Helena upon graduation), the increase in population will remain the

same as the graduating students are continuously replaced by new students. In effect, this project is adding 100 additional people to the community of St. Helena who will be using City water, sewer, streets, parks, library and other finite resources. Since the GMS applies to this project, the Applicant must seek a variance from the GMS. Applicant has failed apply for this variance, as required by Section 17.172.030 and therefore, a Variance to the GMS cannot be granted.

#### **COMPOUNDING EFFECTS OF MULTIPLE PROJECTS ON PRATT AVE./MAIN ST.:**

Multiple projects have been approved or proposed in close proximity of the proposed project that will result in impacts of increased traffic, noise, and use of water/sewer and other finite resources. The following projects include:

1. Los Alcobas Hotel at the intersection of Pratt/Main;
2. Proposed use permit modification by Beringer located at 1000 Pratt Ave. between the proposed project and the intersection of Pratt/Main;
3. Recent expansion of the Wine Train services to include wine tasting cars that cross Pratt Ave. at the west boundary of the proposed project (near the access road where cars will be exiting the property);
4. Vine Trail bicycle path that is proposed to follow the Wine Train railroad from the south side of Pratt Ave and then turn onto Pratt Ave. at the western edge of the dorm property and proceed west on Pratt Ave.

The Impact Study failed to address how the impacts of all of these projects, combined together, will result in even greater impacts on this area than each given project alone. The intersection of Pratt Ave. and Main St. is already rated "F" and is below acceptable standards. This intersection is a main artery in and out of our City. A worsening of the condition of this intersection could have serious detrimental impacts on every resident of our City by causing continuous back up of traffic down our vital Main Street commercial district. It could also result in backing up traffic coming into St. Helena from the north. The consequence of this foreseeable traffic condition will result in making St. Helena a less desirable City for both its residents and tourists. Any proposed project that could potentially impact this intersection should be looked at with increased scrutiny from an environmental impact standpoint. This project should not be approved without the requirement of a full Environmental Impact Report.

#### **CONCLUSION:**

The proposed project requires the following variances:

1. Pratt Ave. Setback from 36' (required) to 20' (requested)
2. Parking Variance from 175 (required) to 72 (requested)
3. Access Road Variance from 30' (required) to 16' (requested)
4. Access Road Variance from being a two-way drive to being a one way drive.
5. Growth Management System

The Variances requested for front setback and parking should be denied due to the inability of the Planning Commission to make the findings required by Section 17.172.050. The Planning Commission should deny the project since the Access Road fails to meet the requirements of Section 17.124.070 B.2.e both in required width and two-way traffic, and a variance was not requested. The GMS applies to this project and since the Applicant has failed to request a variance to this provision, the project should be denied.

The fact that the proposed project requires so many variances speaks to the feasibility of this project. The Applicant is simply trying to put too many people and too many buildings on a piece of property that is not sufficient in size to accommodate their desire to increase their student count by 100.

cc: Charles W. Meibeyer  
Brian Russell  
St. Helena Planning

[illegible]



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UP RECOMMITTAL 9/2/16

| NO.       | DESCRIPTION | DATE |
|-----------|-------------|------|
| REVISIONS |             |      |

THE CULINARY INSTITUTE OF AMERICA

AT PRATT AVENUE

830 PRATT AVENUE

ST. HELENA, CALIFORNIA

SHEET TITLE

OVERALL SITE PLAN

PERMIT AND DESIGN REVIEW SUBMITTAL

6-21-2016

PROJECT NO. 1120803

DRAWN JA

CHECKED JLG

DRAWING NO.

UP2

**SEE SHEET UP3**

**VINEYARD ROAD TO BE IMPROVED PER CITY OF ST. HELENA STANDARDS (2 ACCESSIBLE SPACES, 4 SPACES TOTAL)**

**PARKING (60 SPACES)**

**PARKING (2 ACCESSIBLE SPACES, 4 SPACES TOTAL)**

**ENTRANCE FROM VINEYARD ROAD**

**VINEYARD ROAD**

**PRATT AVENUE**

**20' WIDE PW EASEMENT ROAD EASEMENT**

**20' SETBACK TO PROPERTY LINE**

**(E) BUILDING TO BE DEMOLISHED**

**EXIT TO PRATT AVENUE**

**TRASH ENCLOSURE**

**APPROXIMATE LOCATION OF FIRE HYDRANT**

**DORMITORY BUILDING, TYP OF 3**

**PARKING (2 ACCESSIBLE SPACES, 18 SPACES TOTAL)**

**(E) RAILROAD**

**APPROXIMATE RAILROAD ROW, TYP**

**(E) VINEYARD LODGE 2 BUILDING TO REMAIN**

**SEE SHEET UP4**

**GRAPHIC SCALE IN FEET**

**0 20 40 80**

**APN 008-010-028**

**APN 008-010-024**

**APN 008-010-008**

**APN 008-030-001**

**APN 008-030-080**

**TREE, TYP**

**(E) PARKING**

**(E) FIRE HYDRANT**

**13'±**

**20'±**

**20'±**

**20.04'±**

**137.00'±**

**189.56'±**

**54'±**

**691.98'±**

**67.40'±**

**R=530'**



**Cindy Black**

---

**From:** Noah Housh  
**Sent:** Friday, February 17, 2017 2:24 PM  
**To:** Lilly Bianco  
**Subject:** FW: CIA Project

Noah Housh  
Planning and Community Improvement Director  
City of Saint Helena  
(707) 968-2659

---

**From:** Grace Kistner [mailto:gdkistner@comcast.net]  
**Sent:** Friday, February 17, 2017 2:01 PM  
**To:** Noah Housh  
**Subject:** FW: CIA Project

---

**From:** [tmbelt@comcast.net](mailto:tmbelt@comcast.net) [mailto:tmbelt@comcast.net]  
**Sent:** Friday, February 17, 2017 1:45 PM  
**To:** Grace Kistner  
**Subject:** CIA Project

Grace,  
I've heard squabbling about the expanded CIA housing project proposed on Pratt Avenue. One of the concerns has been that the city's current wastewater lines to that area are currently inadequate to handle the existing sewage, let alone added discharge. Can you enlighten me about this rumor? It would seem reasonable if the CIA wants to add more discharge to an already taxed sewer line, then the CIA should have to pay for an upgrade to the system to accommodate their added burden.

Thank you for you feedback,  
Tom B.

## Cindy Black

---

**From:** Cindy Black  
**Sent:** Friday, February 17, 2017 10:19 AM  
**To:** Lilly Bianco  
**Cc:** Noah Housh  
**Subject:** FW: CIA Housing

Thank you,

Cindy Black  
City Clerk  
City of St. Helena  
1480 Main Street  
St. Helena, CA 94574

General Office 707-967-2792  
Direct 707-968-2742 | Fax 707-963-7748  
[cityclerk@cityofsthelena.org](mailto:cityclerk@cityofsthelena.org)  
[www.cityofsthelena.org](http://www.cityofsthelena.org)

**From:** Sara Chappellet [mailto:sarachappellet@gmail.com]  
**Sent:** Friday, February 17, 2017 10:09 AM  
**To:** Cindy Black <CBlack@cityofsthelena.org>  
**Subject:** CIA Housing

St. Helena Planning Commission

1480 Main Street

St Helena CA 94574

Dear Chair Kistner and Commissioners:

I have been a St. Helena resident for 18 years and the owner of Heaven and Earth for more than 7 years.

The CIA has become an increasingly more important part of our fantastic community.

The people that attend there are investing in themselves, doing an art that they are passionate about, making the world a better place.

What's more is that they live like local consumers while here. They enjoy movies at the Cameo, meals about town, shopping and having services at Heaven and Earth among other shops on Main Street which they walk to, preserving parking for others and reducing traffic.

The CIA has produced countless events that benefit our community over the years and have included gift certificates, donations of products, equipment, volunteering, food, and event support for non profits in our Valley.

This world class school has been an important partner and economic driver in our town for a long time now.

Please allow them to build more student housing on Pratt. They have shown that they are willing to work with the city and community to soften the profile of the project to make it work for everyone.

Thank you,

Sara

Sara Chappellet  
Chief Beauty Officer  
Heaven and Earth  
1317 Main St.  
St. Helena, CA 94574

707-963-1124-office  
707-963-8979-fax  
707-738-5525-cell

Board of Directors  
Chamber of Commerce  
Saint Helena, CA 94574

STAY BEAUTIFUL!  
[www.heavenandearthbeautystore.com](http://www.heavenandearthbeautystore.com)

# Planning Commission



**Project:** Culinary Institute of America  
Campus Master Plan

**Address:** 2555 Main Street;  
830 Pratt Avenue

**File:** PL16-042; PL16-043

# Project Description

## **GREYSTONE – 2555 Main Street:**

### **Design Review and Use Permit**

- Restructure/expand the educational facilities at the Greystone Campus
- Expand student enrollment from 200 to 300 students,
- New 4,468 sf underground storage cave,
- Three modular storage units

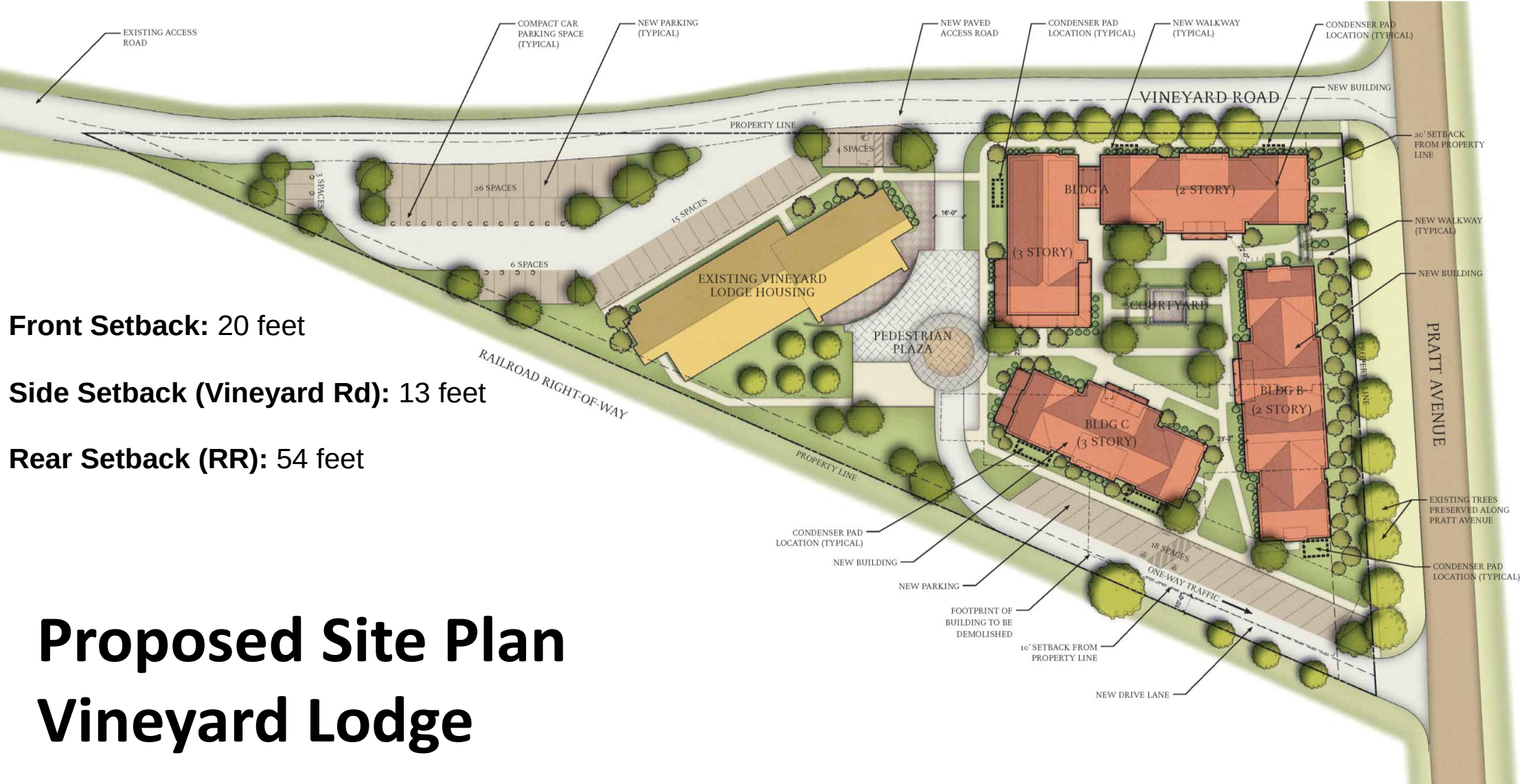
## **VINEYARD LODGE- 830 Pratt Avenue:**

### **Demolition Permit, Design Review, Use Permit, Variances**

- Expand Vineyard Lodge Housing by 123 net new dorm rooms to accommodate a total of 224 residents.







**Front Setback: 20 feet**

**Side Setback (Vineyard Rd): 13 feet**

**Rear Setback (RR): 54 feet**

# Proposed Site Plan Vineyard Lodge



**20' from Pratt Ave Property line**



# Building B

2 stories

Rectangular Plan

Height: 29'2"

20' from Pratt Avenue Property Line



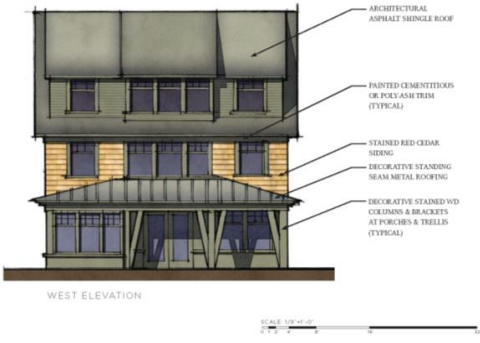
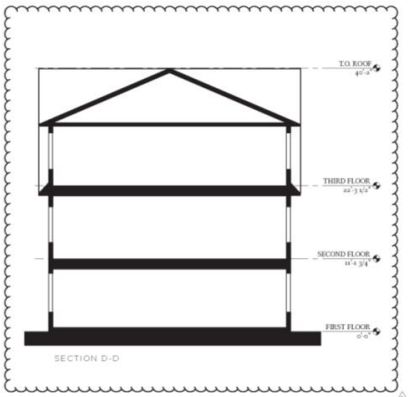
# Building C

3 Stories

Rectangular Plan

Height 40'2"

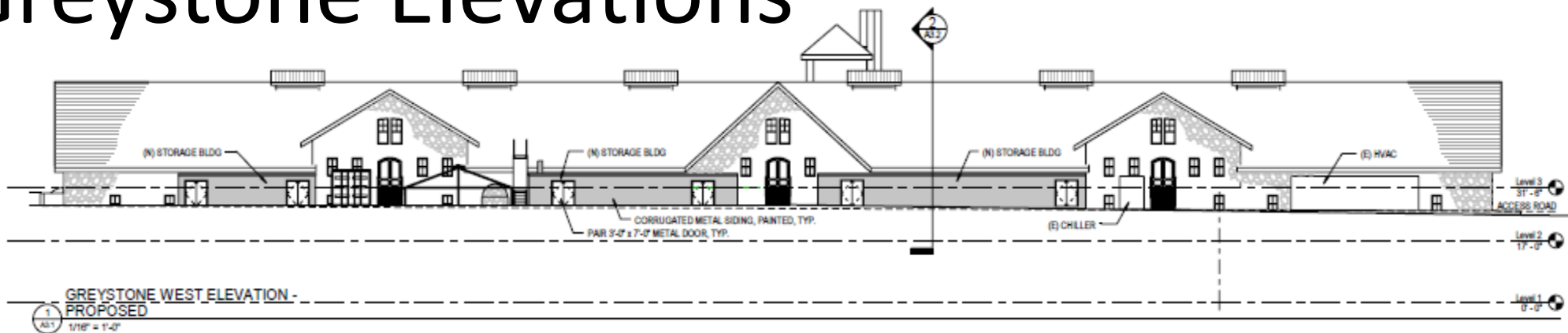
145' from Pratt Avenue Property line

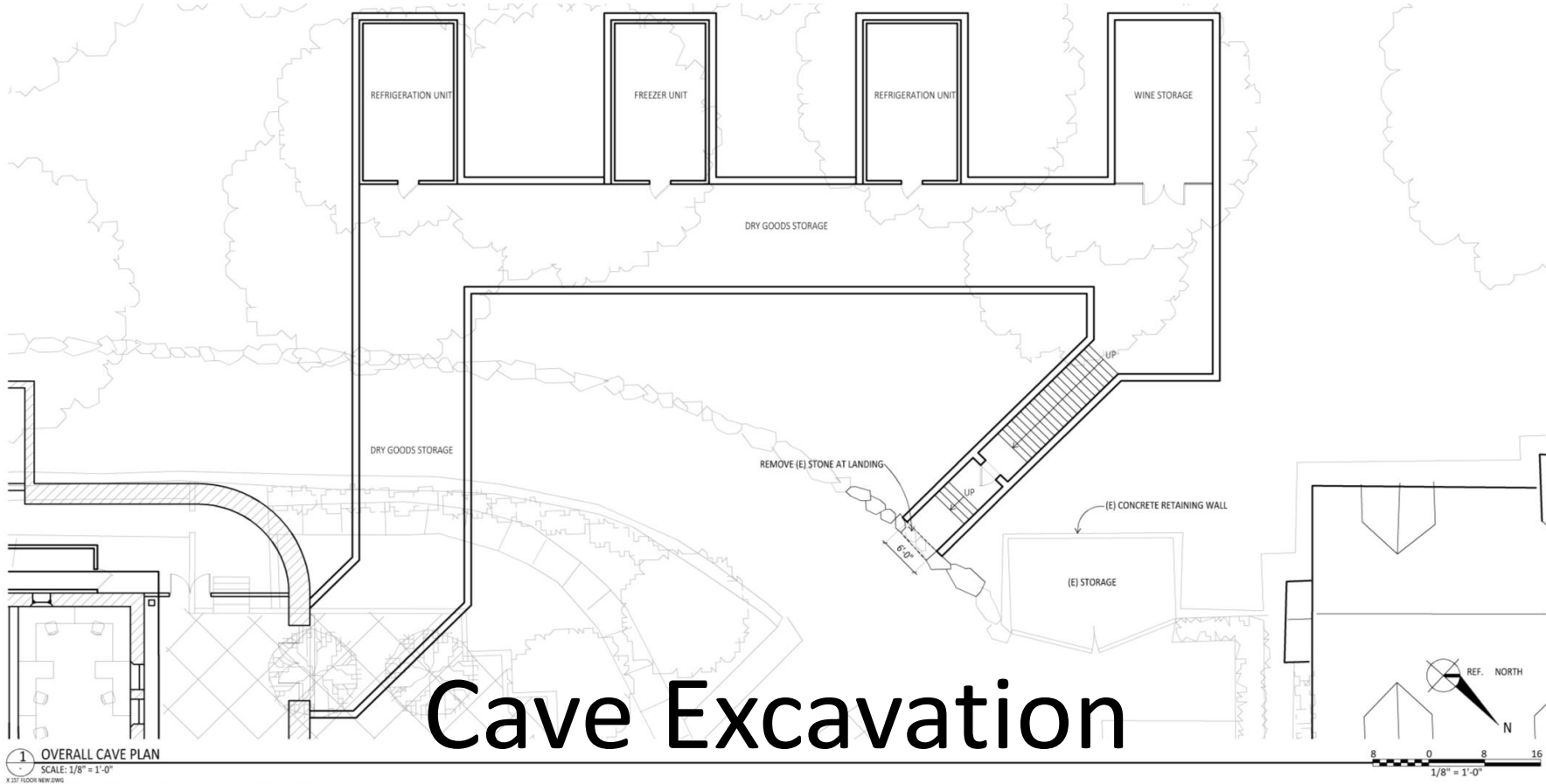




[illegible]

# Greystone Elevations

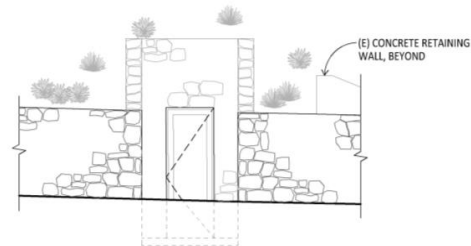




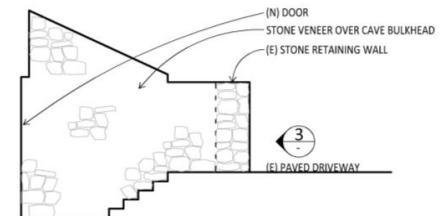
# Cave Excavation



2 CAVE PORTAL EXISTING CONDITIONS



3 CAVE PORTAL EXTERIOR ELEVATION



4 CAVE PORTAL EXTERIOR SECTION

# Operational Characteristics

## Greystone

- To offer Associates Degree and certificate Degree programs
- Ancillary restaurant and commercial facilities

## Vineyard Lodge

- Will operate as student dormitories for CIA students only
- No individual kitchen facilities

## Shuttle Service

Will continue to operate every 15 minutes between the hours of approx. 6am and 9pm.



# **ANALYSIS GREYSTONE CAMPUS**

# Analysis: Greystone

## GENERAL PLAN

**2.6.30** Protect historic resources in the commercial areas and encourage their rehabilitation and re-use

**3.4.3** Give preference to visitor serving uses whose orientation is toward a more discriminating upscale market consistent with the Valley's reputation as a producer of world class wines, and discourage the introduction of uses that are dependent upon a mass tourist market, while not increasing the total number of tourists.

**4.8.1** Preserve historic buildings and landscapes throughout the City of St. Helena as an important component of the City's heritage

**4.8.2** Where feasible adapt historic structures to modern uses to ensure their economic viability and to protect against possible loss.

# Analysis: Greystone

**GP LAND USE:** Public Quasi Public

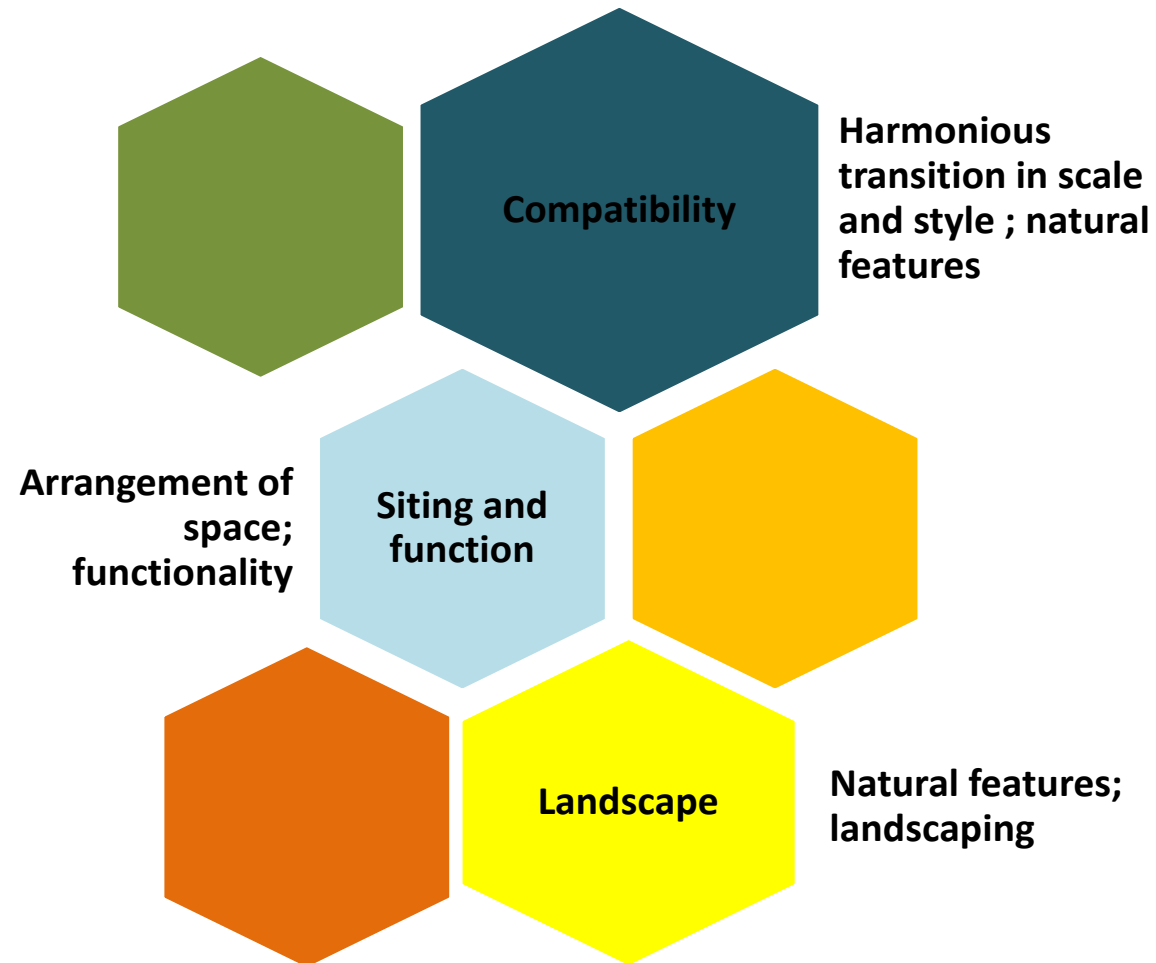
**ZONING:** W: Winery; PD: Planned Development overlay; and HP: Historic Preservation Overlay.

## HP Overlay

1. That the alteration is compatible with the architectural style of the existing structures;
2. ...does not eliminate elements that are required to maintain the essential form and character of the structure;
3. ...is compatible with adjoining structures and the use of such structures.

# Analysis: Greystone

## DESIGN REVIEW



# Analysis: Greystone

## USE PERMIT

### **Existing** Use Permit Authorizes:

- Enrollment of 200 students
- 35 seat bakery/café
- 190 seat WSGR
- 3100 SF retail store
- Special Events

### **New** Use Permit to authorize:

- Enrollment of 300 students
- 35 seat bakery/café
- 58 seat restaurant
- 3100 SF retail store
- Special events

# **ANALYSIS VINEYARD LODGE**

# Analysis: Vineyard Lodge

## GENERAL PLAN/ZONING

**4.3.4** Strengthen community identity by appropriate building design, size, and site landscaping.

**2.6.2** New development should be required to occur in a logical and orderly manner within well-defined boundaries, and be consistent with the ability to provide urban services.

**2.6.4** Permit infill development and higher densities within currently developed areas wherever possible to minimize and postpone the need for expansion of the Urban Service Area.

**2.6.5** Encourage the continuation of agricultural and low-intensity uses adjacent to the Urban Limit Line.

**HE1.5** Encourage innovative housing types and designs.

**HE2.1** Encourage higher density development where appropriate.

**HE2.2** Ensure that higher density housing opportunity sites are not lost to lower density uses.

**HE2.6** Promote a balance of types of housing throughout the whole community



# Analysis: Vineyard Lodge

## GENERAL PLAN/ZONING

### ZONING: Public Quasi Public

It is the purpose of the PQP public and quasi-public district to provide for government-owned facilities, public and private schools and quasi-public uses such as churches and cemeteries. Due to the wide variety of possible public and quasi-public uses and legal relationships involved it is not possible to fully implement a traditional list of uses with fixed development standards. As such, all uses within the PQP Zoning District are subject to a use permit approval with the determination of appropriate development standards (e.g. setbacks, height, etc.,) being deferred to the Planning Commission.

# Analysis: Vineyard Lodge

## VARIANCES

1. Reduced number of parking spaces at the Vineyard Lodge Housing Site.
2. Reduced setback along Pratt Avenue.

# Analysis: Vineyard Lodge

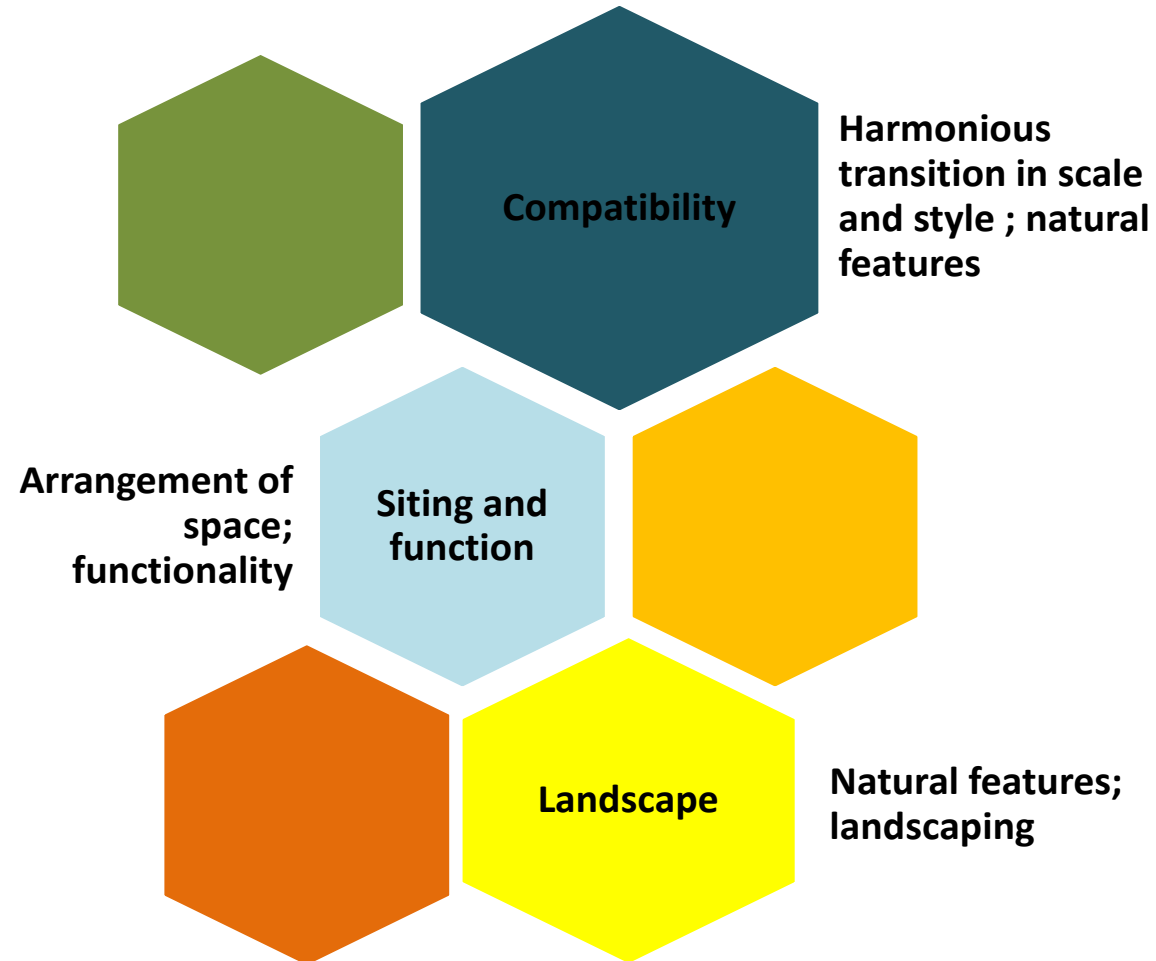
## VARIANCES

### FINDINGS REQUIRED:

- (a) A hardship peculiar to the property, not created by any act of the owner, exists.
- (b) The Variance is necessary for the preservation and enjoyment of substantial property
- (c) The authorization of the Variance will not be of substantial detriment to adjacent properties, and will not materially impair the purpose and intent of this Chapter or the public interest, nor adversely affect the General Plan.
- (d) The condition or situation of the specific piece of property for which the Variance is sought is not so general or recurrent in nature as to make reasonably practicable the formulation of a general regulation for such condition or situation
- (e) The Variance and any buildings or structures permitted by the Variance will not be detrimental to the public health, safety and welfare of the community.

# Analysis: Vineyard Lodge

## DESIGN REVIEW



# VISUAL IMPACT ASSESSMENT





# BEFORE





# AFTER





# BEFORE





# AFTER





# BEFORE





AFTER



# Analysis: Vineyard Lodge

## DEMOLITION PERMIT

1. Does not eliminate elements that are required to maintain the essential character of the neighborhood.
2. Not a significant architectural or historical building.

# Analysis: Vineyard Lodge

## USE PERMIT

### Existing Use Permit Authorizes:

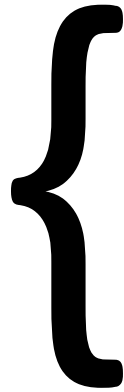
- Two buildings ( VL 1 and VL 2)
- 101 Beds

### New Use Permit to authorize:

- A total of four buildings ( three new)
- 224 beds ( net increase of 123)

# CEQA IS/MND

**All potential impacts  
mitigated to *less  
than significant*  
levels**



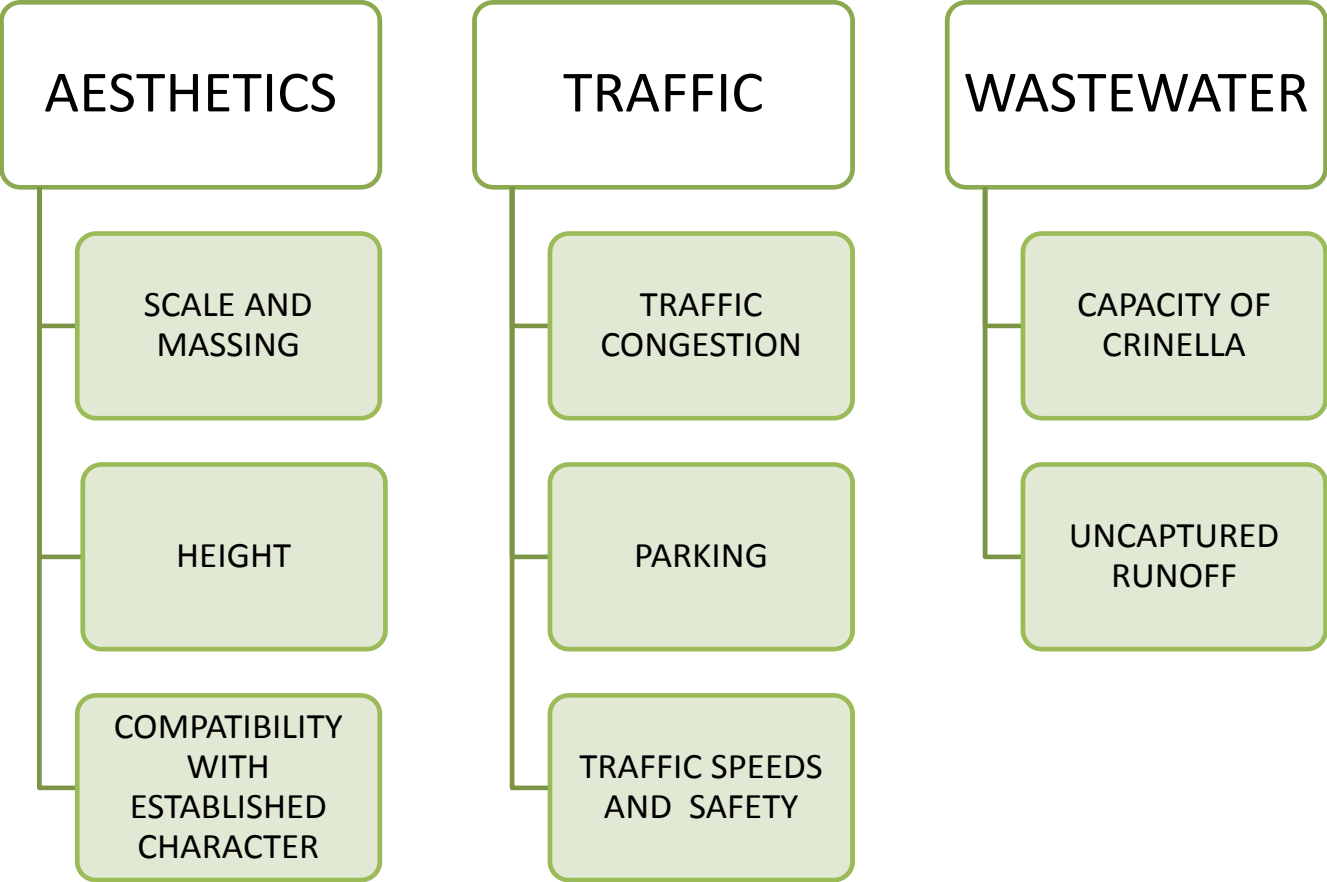
## Potential Impacts Identified:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Land Use
- Noise
- Transportation



# Public Comment

## KEY CONCERNS



# Recommendation

Adopt the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program, and approve the requested Use Permit and Design Review for 2555 Main Street and approve the Demolition Permit, Design Review, Use Permit, and Variances for 830 Pratt Avenue.

# Questions?





**THE CULINARY INSTITUTE OF AMERICA**  
Presentation to the City of St.  
Helena  
Planning Commission

February 2017



# Executive Summary

- The Culinary Institute of America is a world-class culinary college.
- The CIA has been an important community partner and economic driver in St. Helena.
- Our Master Plan is critical to the future of the college and the CIA's long-term presence in St. Helena.



# THE CIA'S ROLE IN THE ST. HELENA COMMUNITY

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# The CIA: An ECONOMIC DRIVER

- The CIA's annual impact on the St. Helena economy is conservatively estimated to be in excess of \$2,000,000 annually through a diverse set of channels including sponsored events, enthusiast programs, weddings, industry conferences, and visitors to historic Greystone.
- The CIA is the magnet for over 200 students and staff who are regular consumers in St. Helena.
- The CIA makes meaningful economic contributions through gifts & donations, sales tax, and TOT tax.
- The CIA invests +\$3,000,000 annually in the continued maintenance and upkeep of the Greystone building.

# Data Summarizing Economic Impact

- Sales Tax - +\$67,200 direct to St Helena in 2016 (+\$420,000 is sales tax collected. 16 cents per dollar to St Helena)
- Hotel room nights - +4,000 annually +\$900,000 annual impact at ADR of \$226
- TOT tax revenue to St Helena in 2016 = +\$146,720\*
- Other gifts + Donations – \$50,000 - \$75,000 annually to the Napa Valley Community
- Weddings, Corporate Events, Enthusiast Programs visitors spending time and money in St Helena businesses
- Economic Impact in St. Helena from Students & Employees
- Built in workforce of students to meet local business need and reduce traffic from out of town workers

\* Average TOT of \$262 Average Daily Rate with 14% TOT = \$36.68.

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# The CIA: A Global Gateway to St. Helena

- CIA-sponsored events draw corporate executives, hospitality industry titans, and thought leaders from around the world to St. Helena every year.
- Many of these individuals are cultured and affluent, making them ideal clientele for St. Helena's many hospitality and retail businesses.

# 2016 Conferences



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# Hotel Room Nights in 2016

| 2016         | Conference                                              |                                              |                                 | Attendees | Hotel Room Nights Booked |
|--------------|---------------------------------------------------------|----------------------------------------------|---------------------------------|-----------|--------------------------|
| <b>Jan</b>   | Appetites & Innovations Retail Leadership Collaborative | Worlds of Healthy Flavors Leadership Retreat | Healthy Menus R&D Collaborative | 285       | <b>482</b>               |
| <b>Feb</b>   | Teaching Kitchen Collaborative Meeting                  | Healthy Kitchens, Healthy Lives              |                                 | 585       | <b>831</b>               |
| <b>March</b> | Flavor Summit Leadership Retreat                        |                                              |                                 | 130       | <b>300</b>               |
|              |                                                         |                                              |                                 |           |                          |

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# Hotel Room Nights in 2016

| <b>2016</b>  | <b>Conference</b>                                    |  |  | <b>Attendees</b> | <b>Hotel Room<br/>Nights<br/>Booked</b> |
|--------------|------------------------------------------------------|--|--|------------------|-----------------------------------------|
| <b>April</b> | Worlds of Flavor International Conference & Festival |  |  | 650              | <b>820</b>                              |
| <b>Aug</b>   | Flavor, Quality & American Menus Leadership Retreat  |  |  | 130              | <b>339</b>                              |
| <b>Nov</b>   | reThink Food Conference                              |  |  | 375              | <b>490</b>                              |
| <b>2016</b>  | Wedding Party Events                                 |  |  |                  | <b>1,939</b>                            |
| <b>2016</b>  | Corporate Events                                     |  |  |                  | <b>2,936</b>                            |
| <b>TOTAL</b> |                                                      |  |  |                  | <b>8,137</b>                            |

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# Community Events

| Event                                             | Dates                        | Benefit to Community                  | Community Served                                         |
|---------------------------------------------------|------------------------------|---------------------------------------|----------------------------------------------------------|
| Lobster Feast at Fire Station                     | 2012-2016<br><b>5 years</b>  | \$7,000/year<br>~30,000 served        | Local Police and Fire Department                         |
| St. Helena Farmers Market Breakfast               | 2007-2016<br><b>10 years</b> | ~\$300-\$400/year<br>100+ attend/year | Farmer's Market                                          |
| Donation - 100 year old Horse Carriage            | 2016                         | St. Helena Museum                     | St. Helena                                               |
| bASH                                              | 2012-2016<br><b>5 years</b>  | 200-300 served/year                   | PR for city, local business/wineries                     |
| St. Helena Farmer's Market Vendor Thank You Lunch | 2007-2016<br><b>10 years</b> | 50-75 served/year                     | Farmer's Market Vendors                                  |
| Auction Napa Valley                               | 2006-2016<br><b>11 years</b> | 1200 served/year                      | Non-profits such as community health and child education |

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# Community Events

| Event                                                                                                               | Dates                        | Benefit to Community                       | Community Served    |
|---------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------|---------------------|
| Duck Dinner at the Veterans Lodge /Oak St.                                                                          | 2005-2016<br><b>6 years</b>  | \$10,000/year<br>100 guests/year           | Veterans            |
| St. Helena Farmer's Market Monthly Meeting                                                                          | 2006-2016<br><b>11 years</b> | Maintains a strong Farmer's Market         | St. Helena          |
| SPICE Community Holiday Open House                                                                                  | 2006-2016<br><b>11 years</b> | Toys for Tots<br>1200 attendees            | St. Helena          |
| SPICE Holiday Greeting Cards to Deployed Veterans                                                                   | 2016                         | 40+ served                                 | Veterans            |
| SPICE Yountville Veteran's Day Celebration                                                                          | 2016                         | 400+ served                                | Yountville Veterans |
| SPICE Ghoulinary Institute at Gravestone<br><small>©The Culinary Institute of America. All rights reserved.</small> | 2014-2016<br><b>3 years</b>  | 250+ served<br>Foodbank/Valley Fire Relief | St. Helena          |

# Community Events

| Event                                            | Dates             | Benefit to Community                | Community Served           |
|--------------------------------------------------|-------------------|-------------------------------------|----------------------------|
| Kindergarten Lecture                             | 2016              | Toys for Tots<br>1200 attendees     | St. Helena                 |
| SPICE Valentine's Day<br>Candy Sale              | 2015              | \$360                               | Valley Fire relief         |
| Napa Valley Fire Relief                          | 2015              | Student/Faculty/Staff<br>volunteers | Lake County Fire<br>Relief |
| Petaluma Health Center<br>Kitchen Ribbon Cutting | 2014              | Provided hors<br>d'oeuvres          | Petaluma Health<br>Center  |
| Community Action Napa<br>Valley                  | 2014<br>6+ visits | Trained participants of<br>CANV     |                            |
| SPICE Memorial Day<br>BBQ with the Veterans      | 2014              | Hosted BBQ                          | Veterans                   |

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# Community Events

| Event                                                                    | Dates                       | Benefit to Community        | Community Served                      |
|--------------------------------------------------------------------------|-----------------------------|-----------------------------|---------------------------------------|
| Project Sanctuary - Ukiah                                                | 2013-2014<br><b>2 years</b> | \$10,000<br>120 served/year | Desserts, proceeds to Women's Shelter |
| CIA Denim Day                                                            | 2015                        | \$931.43                    | Napa Valley Fire Relief               |
| St. Helena High School                                                   | 2010                        | 300 served                  | St. Helena                            |
| Soap Box Derby                                                           | 2006-2008<br><b>3 years</b> | Pizza donated               |                                       |
| SPICE Shop with Cops                                                     | 2015-2016<br><b>2 years</b> | 350 served/year             | Napa Valley Police Dept.              |
| SPICE Outrigger Canoeing Annual Paddle Day                               | 2014-2017<br><b>3 years</b> | 100 attendees/year          | Napa River Recreation                 |
| <b>S.P.I.C.E. - STUDENT PROGRAM INVOLVEMENT and COMMUNITY ENGAGEMENT</b> |                             |                             |                                       |

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# Community Events

| Event                              | Dates                   | Benefit to Community      | Community Served |
|------------------------------------|-------------------------|---------------------------|------------------|
| Cheers St. Helena                  | 2010-2012<br>(4 events) | 1500 served/event         | St. Helena       |
| St. Helena Elementary School Lunch | 2012                    | 80 served lunch           | St. Helena       |
| V-Foundation Cancer Fundraiser     | 2013-2014<br>(2 years)  | Dinner<br>250 served/year |                  |
| Planned Parenthood - Staglin       | 2012                    | 20 people served lunch    |                  |
| Mental Health Dinner - Staglin     | 2014                    | 20 people served lunch    |                  |
| Napa Valley Land Trust Fund Raiser | 2009-2012<br>(4 years)  | Meal donated<br>45 served | Napa Valley      |

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# THE CIA'S MASTER PLAN

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## Master Plan

- The CIA's Master Plan has two components which are inextricably linked:
  - Improvements on the Greystone Campus.
  - Incremental student housing on Pratt Avenue.

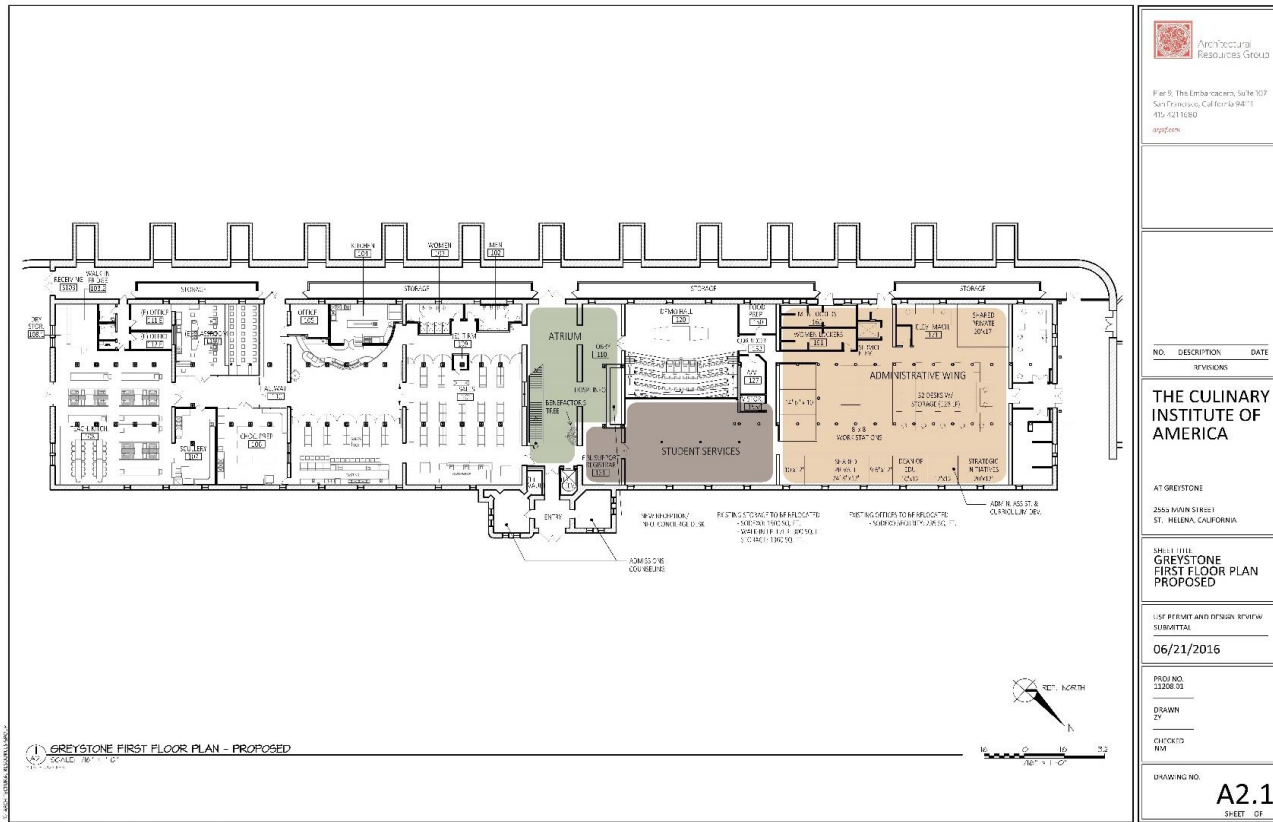


# Master Plan

- Improvements on the Greystone Campus:
  - Reconfigure various interior spaces at Greystone.
  - Improve water / wastewater efficiency.
  - Construct 4,500-square-foot underground storage cave.
  - Install three storage structures behind the building.

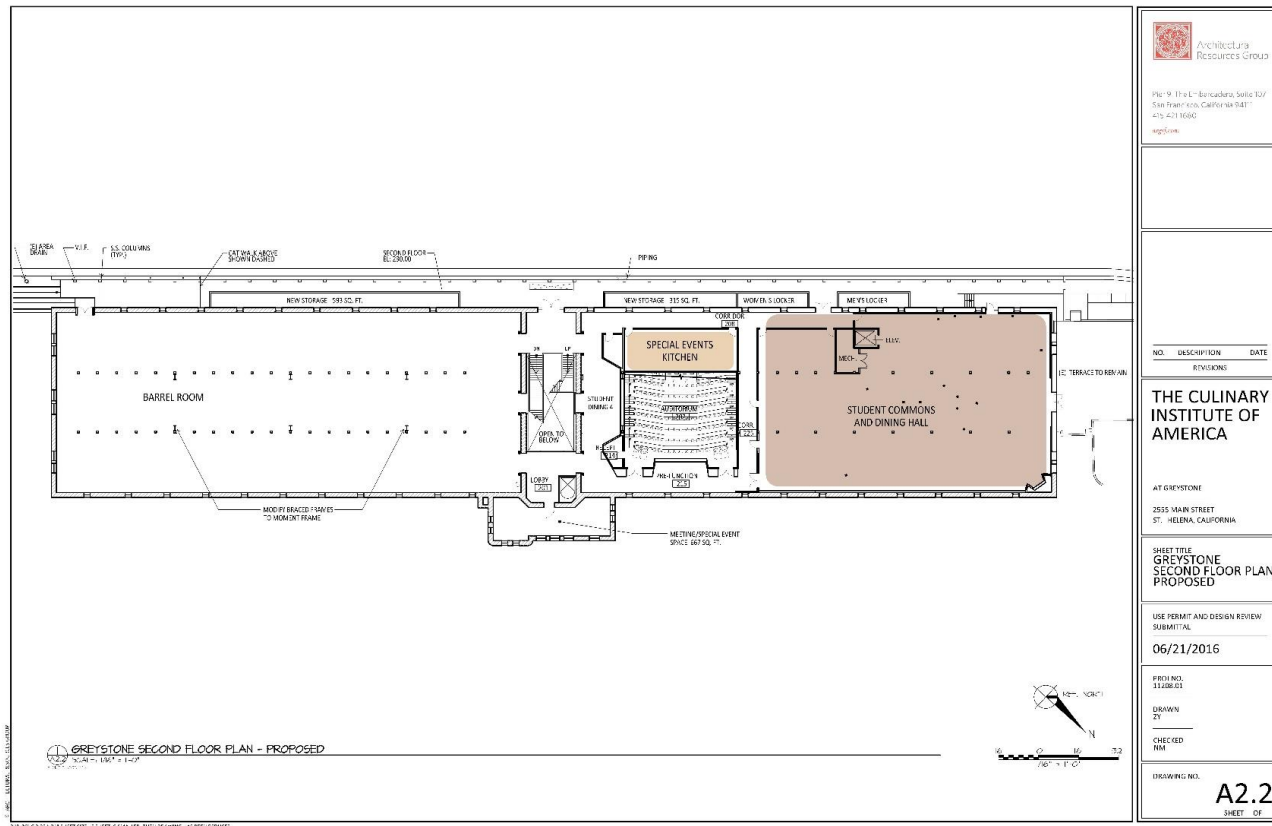


# Greystone – First floor (proposed)

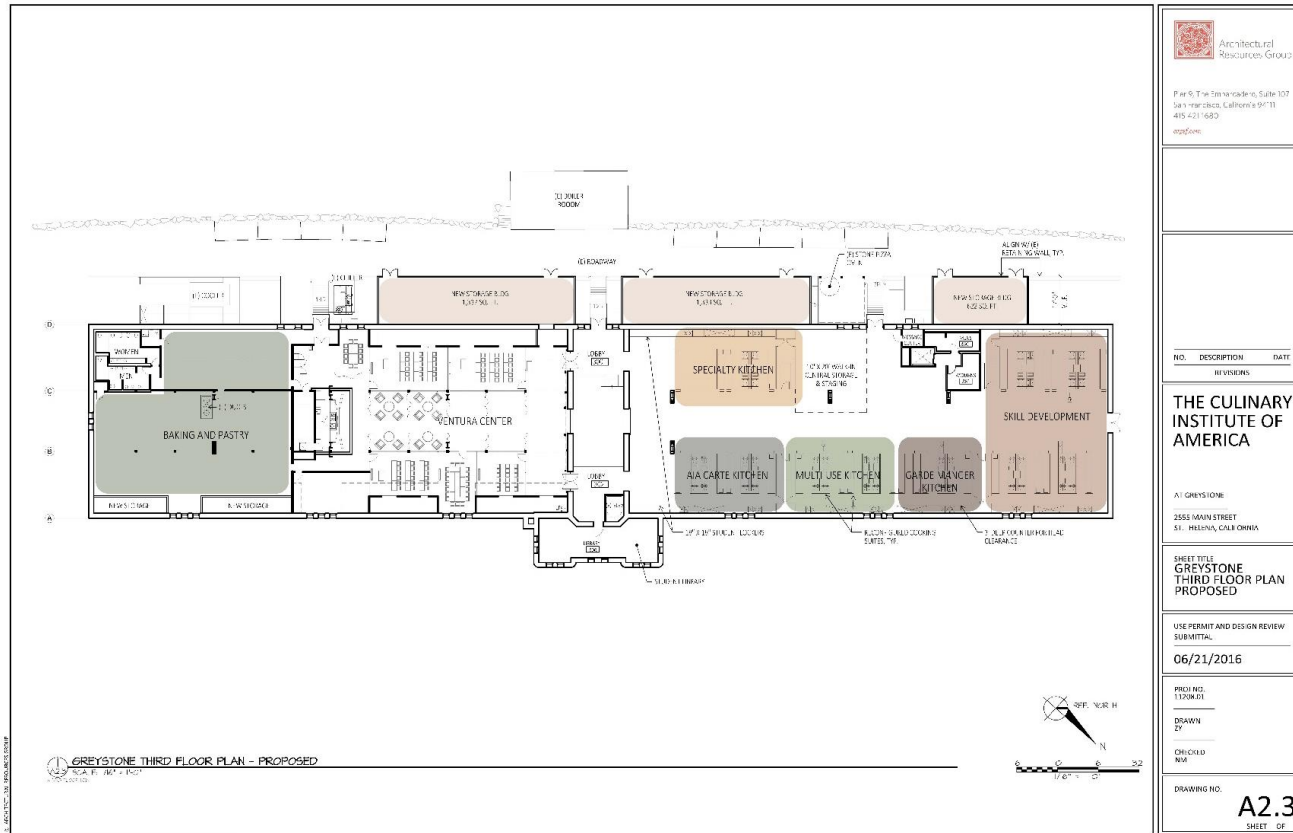


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# Greystone – Second floor (proposed)



# Greystone – Third floor (proposed)



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## Master Plan

- Incremental student housing on Pratt Avenue:
  - Replace the inefficient, “tired” former convalescent home with attractive, purpose-built student housing.
  - Accommodate the measured growth contemplated by the Master Plan.
  - Design housing that is sensitive to the concerns voiced by the community.



## Master Plan

- If the Master Plan is not approved in its entirety, the CIA's ability to succeed in St. Helena will be limited.
  - Vital for institutional growth and utilization of resources.
  - Critical to attracting top students and faculty.



# INCREMENTAL PRATT AVENUE STUDENT HOUSING

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# Incremental Student Housing on Pratt Avenue

- Replacing a portion of the student housing on Pratt Avenue is a key element of the CIA's Master Plan and is vital to the college's continued success in St. Helena.
- The CIA is currently undersupplied with student housing and a significant portion of its existing housing stock is aged and inefficient.
- Site constraints preclude development of any material housing units on Greystone.



## Community Benefits to St. Helena & Pratt Avenue

- Increases the supply of affordable housing in St. Helena by reducing occupancy by CIA students.
- Reduces vehicle traffic downtown on Main Street from students commuting to campus.
- Catalyzes road improvements on Pratt Avenue.
- Preserves the CIA's economic presence in St. Helena.

## Minimal Impact on City Infrastructure

- The proposed student housing has little to no impact, as outlined clearly in CEQA documentation:
  - Water: No increase in water use beyond what's already allowed under CIA Water Agreements for both Greystone and Pratt Avenue
  - Sewer: Immaterial net impact at Pratt Avenue and no impact at Greystone (processed through a private facility and not through a City system).
  - Noise: No significant impacts
  - Traffic: Overall reduction in impacts

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## Select Financial Benefits to St. Helena

- Development impact fees
- \$130,000 payment for a new bike path
- Continued sales tax revenue on +\$4,000,000 in retail and hospitality sales
- Continued TOT revenue in St Helena on +4,000 room nights annually.

## Existing Conditions

- 830 Pratt Avenue was acquired by the CIA in 2004 with the purpose of utilization for student housing.
- Vineyard Lodge I: Developed in the 1960s as the Marlinda Convalescent Home.
- Vineyard Lodge II: Developed by the CIA in 2008-09.

## Existing Conditions

- The site currently contains:
  - Approximately 27,600 total square feet of student housing
  - Approximately 85 parking spots, only 31% of which have been granted permits for on-site parking
- The triangular site is challenging and has limited space.

# Existing Conditions



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# Existing Conditions



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# Existing Conditions



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# Existing Conditions



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# Existing Conditions



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# Proposed Student Housing

- Project Summary:
  - Remove existing Vineyard Lodge I.
  - Retain existing Vineyard Lodge II.
  - Add 123 net new, purpose-built student housing beds.
- Total Beds on Pratt Avenue:
  - Current: 101.
  - Pro Forma: 224.



# Proposed Student Housing

- The incremental impact from the proposed housing is minimal and the project has been revised multiple times in response to feedback from the community:
  - Initially presented at the Neighborhood Meeting on April 20, 2016
  - Revised design submitted to the Planning Department on June 21, 2016
  - Further revised design submitted to the Planning Department on September 2, 2016

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# Primary Design Revisions

- Key areas of re-design based on community feedback are as follows:
  - Massing Along Pratt Avenue
  - Building Setback
  - Building Height
  - Tree Preservation

## Massing Along Pratt Avenue

- In response to community feedback, the buildings along Pratt Avenue were reduced from 3 stories to 2 stories.
- The CIA has significantly revamped its unit mix and floor plans in order to constructively respond to the community's concerns while still satisfying its programmatic needs.



# Massing Along Pratt Avenue

- April 20: The original design comprised 3-story buildings exclusively



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# Massing Along Pratt Avenue

- June 21<sup>st</sup> & September 2<sup>nd</sup>: Only 2-story buildings front Pratt Avenue.



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## Building Setback

- In response to feedback received from the city following a review of the initial design, the CIA increased the setback of the project from the Pratt Avenue Right of Way.
- The initial setback was 26', but it has been increased by nearly 60% to 41' in the current design.

# Building Setback

- April 20: 26' setback from the road



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# Building Setback

- June 21 & September 2: 41' setback from the road



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## Building Height & Tree Preservation

- Feedback related to the extensive preservation of trees along Pratt Avenue and the Vineyard Road has been incorporated more strongly into the final program.
- The height of the 3-story buildings located within the site has been reduced by 7'8", in order to soften the profile of the project even further.



# Building Height & Tree Preservation

- April 20: All 3-story buildings with partial tree cover



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# Building Height & Tree Preservation

- June 21: 2- & 3-story buildings with partial tree cover



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# Building Height & Tree Preservation

- September 2: 2- & 3-story buildings with more extensive tree cover, with the height of 3-story building reduced by an additional 7'8" relative to the June design



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## Summary of Design Changes

- Reduced bed count by 12 beds
- Reduced overall Building Heights:
  - Removed one story along Pratt Avenue
  - Lowered interior 3-story buildings by 7'8"
- Increased the Building Setback by 15'
- Preserved trees along Pratt Avenue and the vineyard road
- Completely removed the planned “Commons” building

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## Conclusion

- The CIA is an important citizen of St. Helena that contributes meaningfully to this community.
- Approval of the CIA's Master Plan is beneficial to St. Helena and is critical to our success in the city.
- The CIA has been responsible, attentive, and flexible over the last 10 months in adapting to the needs of the community while fulfilling our institutional mission with the project.





# ADMINISTRATIVE DETERMINATION



**DATE:** February 17, 2017

**TO:** Greg and Christin Fowler

**FROM:** Noah Housh, Planning and Community Improvement Director

**RE:** Administrative Determination that discretionary Design Review approval to re-develop the property at 2600 Sulphur Springs Road will not require dedication of 30-feet of right-of-way to the City of St Helena for future public street improvements.

## PROJECT DESCRIPTION

The applicants have requested a formal determination regarding any dedication of right-of-way across their property that would be required as a condition of a discretionary Design Review approval of a proposal to demolish the existing structures and construct a new single family home and associated residential structures on the property at 2600 Sulphur Springs. One additional consideration of this request is to determine the appropriate setback from the right-of-way in order to allow the design of the proposed development to occur.

2600 Sulphur Springs is currently encumbered with a "right-of-way 20-feet in width" along the southeasterly property line "for private road purposes and all uses and purposes usually incidental thereto". The existing Vallejo Street right-of-way adjacent to this easement is 30-feet in width and portions of both the public and private right-of-way are currently developed as a dirt road connecting the paved portion of Vallejo Street to Sulphur Springs, open and utilized as public access. In addition, the 1993 City of St Helena General Plan Land Use Map identifies Vallejo Street right-of-way connecting to Sulphur Springs across 2600 Sulphur Springs (the subject property).

It is the determination of the Planning and Community Improvement Director that a discretionary Design Review entitlement required to redevelop the property does not provide the nexus for the City to require the dedication of right-of-way required for this street extension. However, any design to redevelop the property must maintain the ability of the City to construct the future road extension, as identified in the General Plan. Therefore a minimum of a 30-foot setback from the south-eastern property line must be maintained in order for the project to be found consistent with the General Plan. Other discretionary applications (beyond Design Review) triggered by the proposed design redevelopment of the property may modify this Determination.

The justification for the requirement that the project maintain a minimum of a 30-foot setback (the existing 20-foot private right-of-way, plus an additional 10-foot) is based on Design Review Design Criteria enumerated in Municipal Code Section 17.164.030, A. 1. and 11. which state that the Planning Commission shall consider "Consistency and compatibility with the applicable elements of the General Plan" and "Whether access to the property and circulation systems are safe and convenient for pedestrians, cyclists and vehicles", in order to grant approval of a discretionary Design Review application.

In summary, it is the formal staff determination that discretionary Design Review approvals to redevelop the property at 2600 Sulphur Springs Avenue would not require the dedication of a 30-foot right-of-way (the existing 20-foot private right-of way plus an additional 10-feet to satisfy

*Administrative Determination  
2600 Sulphur Springs Road  
February 17, 2017*

the future street design and construction). However a 30-foot setback from the south-eastern property line must be maintained for the reasons listed above.

**APPEALS**

This determination is subject to a 14-day appeal period. Anyone interested in appealing this Determination shall file an appeal with the Planning Director within 14-days of the date of this letter. The letter of appeal must state: (1) the specific action objected to; (2) the action appellant requests the city council to take; (3) the reason for the appeal; and (4) the name, address, and telephone number of the appellant or contact person if there are multiple appellants and be accompanied by the appropriate fee.

Notice of this Determination will be provided to the Planning Commission at their next regularly scheduled meeting (March 7, 2017).

Thank you for your attention to this matter.



Noah Housh  
Planning and Community Improvement Director  
City of St Helena.

*Administrative Determination  
2600 Sulphur Springs Road  
February 17, 2017*