KOTTINGER SENIOR HOUSING

JOINT INITIAL STUDY AND ENVIRONMENTAL ASSESSMENT

March 2014

Prepared for:
City of Pleasanton, County of Alameda
And
MidPen Housing Corporation

AEM CONSULTING
Planning, Public Policy & Environmental Studies

JOINT INITIAL STUDY & ENVIRONMENTAL ASSESSMENT

KOTTINGER SENIOR HOUSING

AEM Consulting
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Santa Rosa, CA 95403

March 2014

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Project Title:

Kottinger Senior Housing

CEQA Lead Agency:

City of Pleasanton
123 Main Street
Pleasanton, CA 94566-7320

(925) 931-5600

NEPA Responsible Entity:

Alameda County Community Development Agency
Housing and Community Development Department
224 W. Winton Avenue, Room 108
Hayward, CA 94544-1307

Linda M. Gardner, Housing Director
(510) 670-5939

Project Location:

240 & 251 Kottinger Drive (APNs 094-0095-033-03 and 094-0019-017, respectively)
4138 Vineyard Avenue (APN 094-0095-017)
4153 Regalia Court (a portion of APN 094-0095-034, to be divided)
Pleasanton, California 94566

Project Sponsor:

MidPen Housing Corporation (MidPen Housing)
303 Vintage Park Dr., Suite 250
Foster City, CA 94404

Abby Goldware, Project Manager
(650) 356-2904

General Plan Designation and Zoning:

The project site is comprised of four (4) separate legal parcels.

The subject property consists of one City-owned senior housing development, one privately-owned senior housing development, a vacant lot and a city owned building. The site is located on the north and south sides of Kottinger Drive in a mixed commercial and residential area of Pleasanton, California. The property totals approximately 6.2 acres and is improved with 29 one-story buildings totaling approximately 54,300 square feet. The subject property is currently occupied by a city owned building (Regalia House), Kottinger Place senior apartments (50 units), Pleasanton Gardens senior apartments (40 units) and a vacant lot. In

addition to the subject property buildings, the property is improved with tenant garden areas, asphalt-paved parking areas and associated landscaping.

Description of the Project:

MidPen Housing Corp. proposes to redevelop and develop a total of four parcels from 90 existing units for a total of 172-189 affordable senior housing apartments on Kottinger Place located on Kottinger Drive, Regalia Court and Vineyard Avenue in Pleasanton, California. The project involves the demolition of the existing apartments, Regalia House and development of one vacant parcel and new construction of Kottinger Place and Pleasanton Gardens Affordable Senior Apartments with associated parking, open space, landscaping and amenities.

Surrounding Land Uses:

To the north, south and west of the subject site are residential single family homes. To the east is Kottinger Park, a 4.93-acre public park.

Discretionary Actions for which this Initial Study may be applied without limitation:

General Plan Amendment
Zoning Change
Parcel sub-division
Design Review
Tree Removal Permit
Demolition Permits
Grading Permits
Building Permits

Alameda County and City of Pleasanton approval of the adequacy of the NEPA document, acting as a responsible entity for environmental review, decision-making and actions pursuant to NEPA that would otherwise apply to HUD.

Other Agency Permits or Discretionary Actions:

Finding of No Significant Impact from Housing and Urban Development (HUD)

Request for Release of Funds (RROF) from Housing and Urban Development (HUD)

Environmental Factors Potentially Affected:

Environmental factors which may be affected by the project are listed alphabetically below. Unmarked factors (❒) were determined to be either not significantly affected by the project or fully mitigated through the implementation of standard conditions of approval adopted by the City of Pleasanton and would be applicable to the project if approved, and will not be further studied in a subsequent EIR.

❒ Aesthetics	☑ Hazards and Hazardous Materials	☑ Population and Housing
❒ Agriculture Resources	☑ Hydrology and Water Quality	❒ Public Services
☑ Air Quality	☑ Land Use and Planning	❒ Recreation
❒ Biological Resources	❒ Mineral Resources	☑ Transportation and Circulation
☑ Cultural Resources	☑ Noise	❒ Utilities and Service Systems
☑ Geology and Soils		

LEAD AGENCY DETERMINATION

On the basis of this initial evaluation:

I find that 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 by, or will be agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

_____ _____

Name and Title Date

City of Pleasanton
123 Main Street
Pleasanton, CA 94566-7320

Environmental Assessment for HUD Funded Proposals – Kottinger Senior Housing

Responsible Entity: [24 CFR 58.2(a) (7)]	Alameda County Community Development Agency Housing and Community Development Department 224 W. Winton Avenue, Room 108 Hayward, CA 94544-1307
Certifying Officer: [24 CFR 58.2(a) (2)]	Linda M. Gardner, Housing Director Phone: (510) 670-5939
Project Name:	Kottinger Senior Housing
Project Location:	240 and 251 Kottinger Drive 4138 Vineyard Avenue 4153 Regalia Court Pleasanton, CA 94566
Estimated total project cost:	$ 61,858,428
Grant Recipient [24 CFR 58.2(a) (5)]**:**	MidPen Housing Corporation (MidPen Housing)
Recipient Address:	303 Vintage Park Dr., Suite 250 Foster City, CA 94404
Project Representative:	Abby Goldware, Project Manager
Telephone Number:	(650) 356-2904

Conditions for Approval: (List all mitigation measures adopted by the responsible entity to eliminate or minimize adverse environmental impacts. These conditions must be included in project contracts or other relevant documents as requirements). [24 CFR 58.40(d), 40 CFR 1505.2(c)]

See Chapter 2 of this document for a complete list of all mitigation measures and Standard Conditions of Approval applicable to the project.

Statement of Purpose and Need for the Proposal: *[40 CFR 1508.9(b)]*

Please refer to Chapter 3 – Project Description for a list of project objectives.

Description of the Proposal: Include all contemplated actions which logically are either geographically or functionally a composite part of the proposal, regardless of the source of funding. [24 CFR 58.32, 40 CFR 1508.25]

The project is proposed as an affordable senior housing project that involves the demolition of 90 units of existing housing known as Kottinger Place and Pleasanton Gardens, the demolition of city-owned Regalia House facility and the redevelopment of the three parcels and one currently vacant parcel with a total of 172-189 units on 6.2 acres. A more detailed description of the project is found in Chapter 3 of this document.

Statutory Checklist [24CFR §58.5]

Record the determinations made regarding each listed statute, executive order or regulation. Provide appropriate source documentation. [Note reviews or consultations completed as well as any applicable permits or approvals obtained or required. Note dates of contact or page references]. Provide compliance or consistency documentation. Attach additional material as appropriate. Note conditions, attenuation or mitigation measures required.

Please refer to Chapter 6 – Other NEPA Considerations for a full discussion of each listed statute, executive order or regulation and HUD Environmental Standards.

Environmental Assessment Checklist: [Environmental Review Guide HUD CPD 782, 24 CFR 58.40; Ref. 40 CFR 1508.8 &1508.27]

Evaluate the significance of the effects of the proposal on the character, features and resources of the project area. Enter relevant base data and verifiable source documentation to support the finding. Then enter the appropriate impact code from the following list to make a determination of impact. Impact Codes: (1) – No impact anticipated; (2) – Potentially beneficial; (3) – Potentially adverse; (4) – Requires mitigation; (5) – Requires project modification. Note names, dates of contact, telephone numbers and page references. Attach additional material as appropriate. Note conditions or mitigation measures required.

Please refer to Chapters 4 – Cultural and Historic Resources and Chapter 5 – Other Environmental Issues for a full discussion of resource issue.

Alternatives and Project Modifications Considered [24 CFR 58.40(e), Ref. 40 CFR 1508.9]

(Identify other reasonable courses of action that were considered and not selected, such as other sites, design modifications, or other uses of the subject site. Describe the benefits and adverse impacts to the human environment of each alternative and the reasons for rejecting it.)

Please refer to Chapter 6 – Alternatives for a full discussion of alternatives considered, including a No Project Alternative.

MITIGATION MEASURES RECOMMENDED [24 CFR 58.40(d), 40 CFR 1508.20]

(Recommend feasible ways in which the proposal or external factors relating to the proposal should be modified in order to eliminate or minimize adverse environmental impacts.)

See Chapter 2 of this document for a complete list of all mitigation measures and Stand Conditions of Approval applicable to the project.

Additional Studies Performed

See Technical Appendices for all technical studies performed pursuant to this analysis.

List of Sources, Agencies and Persons Consulted [40 CFR 1508.0(b)]

Please refer to the references section of this document.

FINDING: [58.40(G)]

✓ **Finding of No Significant Impact** (The project will not result in a significant impact on the quality of the human environment)

Preparer Signature:

_____ Date: _____

Vern Miller Principal, AEM Consulting

Responsible Entity, Approving Official Signature:

_____ Date: _____

Linda M. Gardner, Housing Director

Alameda County Community Development Agency
Housing and Community Development Department
224 W. Winton Avenue, Room 108
Hayward, CA 94544-1307

CHAPTER 1. – EXECUTIVE SUMMARY

PURPOSE OF THE DOCUMENT

This combined NEPA Environmental Assessment and CEQA Initial Study, has been completed to meet applicable requirements of both the California Environmental Quality Act (CEQA) and the National Environmental Protection Act (NEPA). In order to satisfy both CEQA and NEPA, this document has been prepared as a joint Initial Study (IS) under CEQA and an Environmental Assessment (EA) under NEPA for the proposed project.

PROJECT DESCRIPTION - SUMMARY

The project is further described in Chapter 3.

ALTERNATIVES

An Environmental Assessment is required to study, develop and describe appropriate alternatives. For the proposed project, the potential alternatives include:

- Alternative 1 – Alternative Locations
- Alternative 2 - Alternative Design
- Alternative 3 - Alternative Site Uses
- Alternative 4 – No project/No Action Alternative

IMPACTS AND MITIGATION MEASURES

The analysis in Chapters 4 and 5 of this document provides a description of the existing setting, potential impacts of project implementation, and recommended mitigations measures to reduce or avoid potentially significant that could occur as a result of project implementation. Additionally, the project is also subject to City of Pleasanton Standard Conditions of Approval. Table 1.1 below lists a summary statement of each impact and corresponding mitigation measures, as well as the level of significance after mitigation. Following Table 1.1 is a summary of the City of Pleasanton Standard Conditions of Approval that applies to the project, as determined by this Initial Study.

Table 1.1 Summary project Impacts and Mitigation Measures

Potential Environmental Impacts	Recommended Mitigation Measures	Resulting Level of Significance
Air Quality		
During construction, temporary construction dust will be generated. The Best Management Practices for Air Quality impacts should be ongoing throughout site preparation and con-	AQ1. Water all active construction areas as needed to minimize dust; AQ2. Cover all trucks hauling soil, sand, and other loose materials; AQ3. Apply water as needed, or apply (non-toxic) soil stabilizers on all unpaved access roads,	*Less than Significant/No Adverse Impact*

Potential Environmental Impacts	Recommended Mitigation Measures	Resulting Level of Significance
struction.	parking areas and staging areas at the construction site; AQ4. Sweep daily (using water sweepers, as necessary) all paved access roads, parking areas and staging areas on construction site as directed by the City Engineer; and AQ5. Sweep streets as necessary (with water sweepers) if visible soil material is carried onto adjacent public streets, as directed by City Engineer.	
Cultural Resources		
These conditions outline procedures to be followed in the event of accidental discovery of archeological resources, paleontological resources or human remains during construction.	CR1. There is the possibility that buried archaeological materials could be found. If buried materials are encountered, all soil disturbing work should be halted at the location of any discovery until a qualified archaeologist completes a significance evaluation of the find(s) pursuant to Section 106 of the National Historic Preservation Act (36CFR60.4). Prehistoric archaeological site indicators expected within the general area include: chipped chert and obsidian tools and tool manufacture waste flakes; grinding and hammering implements that look like fist-size, river-tumbled stones; and for some rare sites, locally darkened soil that generally contains abundant archaeological specimens. Historical remains expected in the general area commonly include items of ceramic, glass, and metal. Features that might be present include structure remains (e.g., cabins or their foundations) and pits containing historical artifacts. CR2. In the event that human skeletal remains are uncovered at the project site during construction or ground-breaking activities, all work shall immediately halt and the Alameda County Coroner shall be contacted to evaluate the remains, and shall follow the procedures and protocols pursuant to Section 15064.5 (e)(1) of the CEQA Guidelines. If the County Coroner	*Less than Significant/No Adverse Impact*

Potential Environmental Impacts		Recommended Mitigation Measures	Resulting Level of Significance
		determines that the remains are Native American, the City shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, and all excavation and site preparation activities shall cease within a 50-foot radius of the find until appropriate arrangements are made. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume construction activities. Monitoring, data recovery, determination of significance and avoidance measures (if applicable) shall be completed expeditiously.	
Geology and Soils			
This condition is to ensure all geologic conditions at the site, such as seismic design parameters, are addressed.	G1.	Follow all recommendations in the Geotechnical Investigation for Kottinger Residential Development, 240 & 251 Kottinger Drive, 4138 Vineyard Avenue, Pleasanton, California prepared by AMSO Consulting Engineers and dated March 8, 2013 and found in Appendix D.	*Less than Significant/No Adverse Impact*
Hazards & Hazardous Materials			
These conditions are to eliminate the exposure risk of sensitive receptors to toxics and hazardous materials.	HZ1.	Prior to the demolition of the existing structures on site, the amount and extent of any Asbestos-Containing Building Materials (ACBMs) and/or lead-based paint (LBP) should be ascertained and all hazardous materials found to be present should be properly handled, removed, recycled, and/or disposed of by properly certified contractors using approved methods in accordance with all applicable federal, state, and local regulations.	*Less than Significant/No Adverse Impact*

Potential Environmental Impacts	Recommended Mitigation Measures	Resulting Level of Significance
Hydrology and Water Quality		
These conditions are to prevent storm water pollution during and after construction and that adequate water will be provided to the site.	*Hydrology* H1. The project will be required to implement Hydrograph Modification Management (HM). With HM, the project therefore must include in the design of its storm drainage system detention measures, using the Bay Area Hydrologic Model (BAHM) program that must be sized to control the flow and duration of the storm water runoff. H2. During project review, the applicant must prepare a maintenance plan and enter into an operation and maintenance agreement with the municipality to identify and record the party responsible for long-term maintenance of HM controls and stormwater treatment measures. *Water Quality* WQ1. It is the responsibility of the applicant to comply with Federal, State, and local water quality standards and regulations. In order for the County and the applicant to comply with the Alameda Countywide Clean Water Program's (ACCWP) National Pollutant Discharge Elimination System (NPDES) Municipal Storm Water Permit issued by the San Francisco Bay Regional Water Quality Control Board, water quality protection must be implemented both during construction and after construction. Permanent measures to protect water quality will reduce pollution that is commonly produced from the creation of new impervious surfaces such as roads and rooftops. The applicant shall provide measures to prevent discharge of contaminated materials into public drainage facilities both during construction and post-construction periods. The primary	*Less than Significant/No Adverse Impact*

Potential Environmental Impacts	Recommended Mitigation Measures	Resulting Level of Significance
	references for providing stormwater treatment are "ACCWP C.3 Stormwater Handbook" and the "California Best Management Practices (BMP) Handbook for New Development and Redevelopment, 2003".	
	WQ2. Projects with disturbances greater than one acre must file a Notice of Intent (NOI) with the State Water Resources Control Board (SWRCB) per the regulations of the General Construction Activities NPDES permit. The SWRCB will require the preparation of a Storm Water Pollution Prevention Plan (SWPPP). The NOI and the SWPPP must be submitted prior to issuance of a grading permit and prior to any land disturbance of on the site. The SWPPP will include specifications for best management practices (BMPs) that will be implemented during project construction to minimize the potential for accidental releases or contamination, and to minimize runoff from the construction areas, including storage and maintenance areas and building materials laydown areas. Measures should include dust control, such as water spraying or application of dust suppressants, and gravel covering of high traffic areas, temporary storage of excavated soil material, and controls on the release of groundwater generated by dewatering. The SWPPP will also include a description of a plan for communicating appropriate work practices to field workers and a plan for monitoring, inspecting and reporting any release of hazardous materials.	
	Water Supply	
	WS1. In consultation with the City of Pleasanton's Operations Services Department, abandon the existing 16" water main that runs from Kottinger Drive down the center of the site to Vineyard Avenue and upgrade the existing water main running under First Street to cur-	

Potential Environmental Impacts	Recommended Mitigation Measures	Resulting Level of Significance
	rent water main standards and connect to Vineyard Avenue.	
Land Use and Planning		
These conditions are to allow a portion of the Kottinger Village Community Park parcel that includes Regalia House to be included in the project and to allow the redevelopment of the subject parcels to a higher density.	E1. Divide parcel containing 4153 Regalia House also known as 4136 Vineyard Avenue with Assessor's Parcel Number 094-0095-034. E2. Obtain a General Plan Amendment (GPA) and Planned Unit Development (PUD) designation approval for all subject parcels.	*Less than Significant/No Adverse Impact*
Noise		
These conditions are to ensure interior noise levels meet standards of acceptability for noise exposed areas.	N1. Windows/doors within 60 feet of the center of Vineyard Avenue and having direct line of sight to the roadway should be 24 STC or greater to achieve an interior noise level of below 45 dBA L_{dn}. N2. All units within 100 feet of the centerline of Vineyard Avenue should be mechanically ventilated so that windows can be kept closed at the occupant's discretion to control noise.	*Less than Significant/No Adverse Impact*
Population and Housing		
The project will involve relocation of Pleasanton Gardens and Kottinger Place residents at some point in the development process.	U1. The project will involve relocation of residents. The project will be subject to the Uniform Relocation Act (46 U.S.C. § 4600 et seq.), passed by Congress in 1970, its implementing regulations (49 C.F.R.) Part 24); the California Relocation Assistance Law, California Government Code Section 7260 et seq (the "CRAL") and the California Relocation Assistance and Real Property Acquisition Guidelines, Title 25, California Code of Regulations, Chapter 6, Section 6000 et seq. (jointly the "Rules and Regulations"). A conforming relocation plan has been developed and is being	*Less than Significant/No Adverse Impact*

Potential Environmental Impacts	Recommended Mitigation Measures	Resulting Level of Significance
	implemented.	
Transportation		
These conditions address any visibility issues for motorists exiting the proposed project site from the driveways.	TR1. It is recommended that on-street parking be prohibited for 50 feet on either side of the proposed driveway and 50 feet west of the existing driveway on Vineyard Avenue to maintain clear sight lines and reduce potential conflicts between the existing and proposed driveway. TR2. It is recommended that periodic maintenance, including trimming of the vegetation on both sides of the project driveways on Kottinger Drive and Vineyard Avenue, be undertaken to maintain clear sight lines.	*Less than Significant/No Adverse Impact*

CHAPTER 2. – INTRODUCTION

This document is a joint Environmental Assessment and Mitigated Negative Declaration (EA/MND) with an Initial Study, intended to meet the requirements of both the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). The purpose of the EA/MND is to assess the potential environmental effects of implementing the Kottinger Senior Housing project (proposed action/proposed project) and to determine if approval of the requested discretionary actions and subsequent development would have a substantial adverse effect on the environment. The action is proposed by the City of Pleasanton as the lead agency under CEQA. The Alameda County is the Responsible Entity under NEPA. In accordance with both NEPA and CEQA, this draft EA/MND is subject to a 30-public review period.

NEPA

This document constitutes a draft Environmental Assessment, pursuant to NEPA, which will determine if the proposed project, with conditions, will qualify for a Finding of No Significant Impact (FONSI). Following consultation with appropriate agencies and local stakeholders, and subsequent public review, the draft document will be revised to a final version, including answers to all comments received. Once the EA/MND is complete, Alameda County Community Development Agency will either issue a FONSI or decide to prepare an Environmental Impact Statement (EIS) under NEPA.

Differences exist in the way adverse effects of a proposed project are addressed between NEPA and CEQA. Under NEPA, the discussion focuses upon potentially “adverse effects” whereas CEQA is concerned with “significant impacts”. Here “adverse effect” is used to distinguish between a potentially beneficial effect or impact and deleterious ones. Additionally, while CEQA requires environmental analyses to determine whether an impact is expected to be nonexistent (“no impact”), “Less than Significant/No Adverse Impact”, “Less than Significant/No Adverse Impact with mitigation incorporated”, or “potentially significant”, NEPA does not require this.

According to NEPA, the Environmental Assessment discusses the degree to which a resource is adversely affected and this is used to determine which subsequent document is necessary (e.g., an EIS or FONSI). Once the applicable federal agency (in this case, Alameda County Community Development Agency acting as the Certifying Agency under the US Department of Housing and Urban Development) has determined the magnitude of the action’s adverse effects and the level of environmental documentation required, it is the magnitude of the adverse environmental effects that is evaluated in the environmental document and no judgment of its degree of significance is recognized in its analysis. Here, determinations regarding significance are made in the context of CEQA and are included as the Initial Study Checklist.

This document is based on the CEQA Environmental Checklist, but incorporates additional considerations to satisfy NEPA and the statutory requirements for HUD-funded projects. The conclusions reached in this document support the adoption of a Mitigated Negative Declaration (MND) under CEQA, and a Finding of No Significant Impact (FONSI) under NEPA.

CEQA

The CEQA process, established by state law, requires the review of proposed projects in order to identify and address potential environmental effects. A public agency must comply with CEQA when it undertakes an activity defined as a "project”. In accordance with CEQA, a project is an activity undertaken by a public agency or a private

activity which must receive some discretionary approval (whereby the agency has the authority to deny the requested permit or approval) from a government agency which may cause either a direct physical change in the environment or a reasonably foreseeable indirect change in the environment. Once a public project or a project requiring discretionary approval is identified, a determination must be made regarding whether the project is exempt from CEQA.

Projects which are not exempt from CEQA require a Negative Declaration or an Environmental Impact Report (EIR). When a project does not result in any significant environmental effects, or project modification and/or mitigation measures reduce these impacts to a less-than-significant level, a Negative Declaration is prepared. An EIR must be prepared if a project may have one or more potentially significant environmental effects that cannot be mitigated to a less-than-significant level. The appropriate level of environmental documentation required for a project can be determined using an Initial Study checklist (incorporated herein).

The Mitigated Negative Declaration (MND) and Initial Study contained herein have been prepared in accordance with CEQA (Public Resources Code §21000), the State CEQA Guidelines (Title 14, California Code of Regulations, §15000).

CITY OF PLEASANTON'S ROLE UNDER CEQA

Prior to approving the project, the decision-making body of the lead agency must consider this document together with any comments received during the public review process. The decision-making body will adopt the document only if it finds on the basis of the whole record before it that there is no substantial evidence that the project will have a significant effect on the environment and that the document reflects the lead agency's independent judgment and analysis.

Upon completion of the public review period, the environmental document will be evaluated via a governmental decision-making process. Initially, the City's Planning Commission will consider the environmental document along with any comments received during the public review process. Ultimately, final consideration and adoption of the environmental document and project approval will be done by the Pleasanton City Council. During the decision-making process, opportunities to address the decision-makers concerning the project will be provided through public hearings, which are announced at least 72 hours in advance. Notification of hearings can be obtained from City of Pleasanton, Planning Department, 123 Main Street, Pleasanton, CA 94566.

The analysis in this document assumes that, unless otherwise stated, the project will be designed, constructed and operated following all applicable laws, regulations, ordinances and formally adopted federal, State and City standards. The subsequent sections of this document contain a discussion of the proposed project, its potential environmental impacts, and recommendations regarding necessary environmental documentation.

COUNTY OF ALAMEDA'S ROLE AS RESPONSIBLE ENTITY UNDER NEPA

The project is proposed as an affordable housing project for seniors that involves four parcels. Two of the parcels will be redeveloped by demolition of the existing senior housing on the parcels and construction of higher-density housing. One parcel is vacant and additional units will be constructed. The fourth parcel is occupied by city-owned building Regalia House that will be demolished and redeveloped as part of the Kottinger Place site. The project anticipates obtaining federal funding through HUD, under Project-Based Section 8 Vouchers authorized by the United States Housing Act of 1937. Alameda County would serve as the recipients of these funds, and use the funds to provide financial assistance for construction or long-term financing to the project sponsor, and sub-

recipient, MidPen Housing Corporation. A project receiving federal funding is the nexus that triggers a Federal Action and are thus required to comply with NEPA.

Under the Code of Federal Regulations (24 CFR Part 58), recipients of HUD assistance (Alameda County) act as a "responsible entity" for conducting environmental review. Responsible entities assume the responsibility for environmental review, decision-making and actions that would otherwise apply to HUD. Responsible entities that receive assistance from HUD assume these responsibilities by execution of a grant agreement with HUD, or other legally binding document. The County of Alameda has executed such an agreement with HUD, assigning the responsibility for environmental review to Alameda County Community Development Agency, and naming the Housing Director as the NEPA Certifying Officer.

CHAPTER 3. – Existing Conditions and Trends

(Describe the existing conditions of the project area and its surroundings, and trends likely to continue in the absence of the project. [24 CFR 58.40(a)])

Regional Outlook

The Bay Area continues to be one of the priciest real estate markets in the country. Despite the recent mortgage crisis and soaring number of foreclosures, most Bay Area homes continue to be too expensive for families with average household incomes to afford. In 2007, only about 15 percent of Bay Area households could afford a median priced home. This percentage was even lower in some Bay Area counties: 14 percent in Santa Clara, 13 percent in Alameda and Marin Counties, 12 percent in Napa and San Mateo and 10 percent in San Francisco. All projections indicate that housing affordability, even with the short-term dip in prices, likely will remain a major regional issue.

Low levels of housing production, relative to demand, contribute to this region's high housing costs. The need for housing generated by the Bay Area's annual increase in population was 33,400 units per year during the 1980s. At that time, about 40,000 housing units were added to the supply each year, sufficient to meet new demand. Since the 1990s, production has varied from year to year, but overall it has not kept up with population growth. Compared to the 1980s, annual population increases were slightly lower in the 1990s. Based on this growth, 29,500 housing units were needed in the region. However, housing production during the 1990s declined to about 27,000 units per year. Since 2000, the housing need from population increases is estimated to be 23,700 units per year. Actual housing production has been better, relative to the 1990s. Since 2000, an average of 23,336 housing units has been built per year. The year 2007 marked the highest production at 24,396 units. The lowest production year since 2000 was 2001 with 17,459 units. Source documentation: [(1)]

On top of the low historical production levels in the region, the mix of available housing types also contributes to higher home prices. In many Bay Area communities, mostly large single-family homes are being planned for and built. This offers consumers limited choice in housing types, especially for relatively more affordable smaller homes, condominiums, townhomes, or apartments for seniors.

Local Perspective

According to the Association of Bay Area Governments (ABAG) [(1)] the Alameda County Housing Needs Allocation 2007 to 2014, the City of Pleasanton should add 3,277 new units by 2014 in order to meet the needs for affordable housing (Table 3.1).

Table 3.1 Alameda County Housing Needs Allocation, 2007 to 2014

	Very low, < 50%	Low, < 80%	Moderate, < 120%	Above Moderate	Total
Alameda	482	329	392	843	2,046
Albany	64	43	52	117	276
Berkeley	328	424	549	1,130	2,431
Dublin	1,092	661	653	924	3,330
Emeryville	186	174	219	558	1,137
Fremont	1,348	887	876	1,269	4,380
Hayward	768	483	569	1,573	3,393
Livermore	1,038	660	683	1,013	3,394
Newark	257	160	155	291	863
Oakland	1,900	2,098	3,142	7,489	14,629
Piedmont	13	10	11	6	40

Pleasanton	1,076	728	720	753	3,277
San Leandro	368	228	277	757	1,630
Union City	561	391	380	612	1,944
Unincorporated	536	340	400	891	2,167
Alameda Total	10,017	7,616	9,078	18,226	44,937

PROJECT LOCATION AND EXISTING SITE CONDITIONS

Pleasanton is a city in Alameda County, California, incorporated in 1894. It is a suburb in the San Francisco Bay Area located about 25 miles (40 km) east of Oakland, and 6 miles (9.7 km) west of Livermore. The population was 70,285 at the 2010 census. In 2005 and 2007, Pleasanton was ranked the wealthiest middle-sized city in the United States by the Census Bureau. Pleasanton is home to the headquarters of Safeway Inc., Blackhawk Network, and Ross Stores. Although Oakland is the Alameda County seat, a few county offices and a courthouse are located in Pleasanton. Additionally, the main county jail is in the neighboring city of Dublin. The Alameda County Fairgrounds are located in Pleasanton and are held during the last week of June and the first week of July. Pleasanton Ridge Regional Park is located on the west side of town.

Pleasanton is located on the Rancho Valle de San José Mexican land grant and was founded by John W. Kottinger, an Alameda County justice of the peace, and named after his friend, Union army cavalry Major General Alfred Pleasonton. A typographical error by a U.S. Postal Service employee apparently led to the current spelling.

Pleasanton is located at 37°40’21”N 121°52’57”W37.67250°N (37.672530, -121.882517) and is adjacent to Hayward, Livermore, and Dublin. According to the United States Census Bureau, the city has a total area of 24.3 square miles (63 km2), of which, 24.1 square miles (62 km2) of it is land and 0.2 square miles (0.52 km2) of it (0.63%) is water. On the east side of town on Stanley Blvd. near the Livermore border is Shadow Cliffs Regional Park, a lake that holds swimming, fishing, boating, and a waterslide. On the west side is the Pleasanton Ridge with the two parks Pleasanton Ridge and Augustin Bernal Park. Much of Pleasanton is drained by the Arroyo del Valle and Arroyo Mocho watercourses. Pleasanton lies along the route of the historic First Transcontinental Railroad.

The 2010 United States Census reported that Pleasanton had a population of 70,285. The population density was 2,896.5 people per square mile (1,118.4/km²). The racial makeup of Pleasanton was 47,058 (67.0%) White, 1,190 (1.7%) African American, 226 (0.3%) Native American, 16,322 (23.2%) Asian, 134 (0.2%) Pacific Islander, 2,002 (2.8%) from other races, and 3,353 (4.8%) from two or more races. Hispanic or Latino of any race were 7,264 persons (10.3%).

The Census reported that 69,829 people (99.4% of the population) lived in households, 320 (0.5%) lived in non-institutionalized group quarters, and 136 (0.2%) were institutionalized.

There were 25,245 households, out of which 10,785 (42.7%) had children under the age of 18 living with them, 16,206 (64.2%) were opposite-sex married couples living together, 2,024 (8.0%) had a female householder with no husband present, 948 (3.8%) had a male householder with no wife present. There were 887 (3.5%) unmarried opposite-sex partnerships, and 156 (0.6%) same-sex married couples or partnerships. 4,860 households (19.3%) were made up of individuals and 1,853 (7.3%) had someone living alone who was 65 years of age or older. The average household size was 2.77. There were 19,178 families (76.0% of all households); the average family size was 3.20.

The population was spread out with 19,024 people (27.1%) under the age of 18, 4,378 people (6.2%) aged 18 to 24, 17,257 people (24.6%) aged 25 to 44, 21,965 people (31.3%) aged 45 to 64, and 7,661 people (10.9%) who were 65

years of age or older. The median age was 40.5 years. For every 100 females there were 96.1 males. For every 100 females age 18 and over, there were 93.0 males.

There were 26,053 housing units at an average density of 1,073.7 per square mile (414.5/km²), of which 17,891 (70.9%) were owner-occupied, and 7,354 (29.1%) were occupied by renters. The homeowner vacancy rate was 0.9%; the rental vacancy rate was 4.1%. 51,839 people (73.8% of the population) lived in owner-occupied housing units and 17,990 people (25.6%) lived in rental housing units.

The subject site is located in the eastern area of Pleasanton in an area of mostly single family residences, duplexes and apartments. The site is bisected by Kottinger Drive. Vineyard Avenue is east of the site and Regalia Court pierces the site from Vineyard Avenue west. The subject site is comprised of four parcels, three of which are contiguous and one (Pleasanton Gardens) is west across Kottinger Drive. The parcels together form an irregular shape. The site is relatively flat and lies approximately 358 feet above mean sea level. The site is improved with the road Bloom Lane.

CURRENT GENERAL PLAN AND ZONING DESIGNATIONS

The following are the General Plan Land Use Designations and current zoning for each subject parcel:

Address	General Plan Land Use Designation	Current Zoning
240 Kottinger Drive:	High Density Residential; Greater than 8 dwelling units per acre	RM-25 Multiple Family Residential, 2,500 square foot lot/per unit
251 Kottinger Drive:	High Density Residential; Greater than 8 dwelling units per acre	RM-25 Multiple Family Residential, 2,500 square foot lot/per unit
4138 Vineyard Drive:	High Density Residential; Greater than 8 dwelling units per acre	RM-4 Multiple Family Residential, 4,000 square foot lot/per unit
4153 Regalia Court:	Open Space; Parks and Recreation	R-1-65 Single Family Residential, 6,500 square foot minimum lot

EXISTING LAND USES

240 Kottinger Drive: 3.45 acre site that is occupied by Kottinger Place, an affordable senior housing development that consists of 50 units

251 Kottinger Drive: 1.94 acre site that is occupied by Pleasanton Gardens, an affordable senior housing development that consists of 40 units

4138 Vineyard Drive: 0.50 acre site that is owned by the City of Pleasanton and is currently vacant

4153 Regalia Court: Currently, this site which houses “Regalia House” is part of the parcel that includes Kottinger Park. This parcel will be divided upon project commencement activities. The portion of the parcel where Regalia House is located, is north of the access street, Regalia Court, and is therefore segregated from the rest of Kottinger Park by the street.

SURROUNDING LAND USES

The project site lies in a residential area of Pleasanton, near to downtown Pleasanton. The four project parcels are surrounded by residential land uses to the west, north and south and Kottinger Park to the east. One parcel, currently Pleasanton Gardens is west of Kottinger Drive, the other three parcels are on the east side of Kottinger Drive. The project parcel is adjacent to twenty-seven (27) other parcels, most of which contain single family homes constructed in the early to mid-20th century, and one is a park.

PROPOSED PROJECT

The subject property consists of one city-owned senior housing development, one privately-owned senior housing development, a vacant lot and a city owned building. The site is located on the north and south sides of Kottinger Drive in a mixed commercial and residential area of Pleasanton, California. The property totals approximately 6.2 acres and is improved with 29 one-story buildings totaling approximately 54,300 square feet. The subject property is currently occupied by a city owned building (Regalia House), Kottinger Place senior apartments (50 units), Pleasanton Gardens senior apartments (40 units) and a vacant lot. In addition to the subject property buildings, the property is improved with tenant garden areas, asphalt-paved parking areas and associated landscaping.

MidPen proposes to demolish the existing improvements and redevelop the site with 172-189 units of affordable senior housing to be known as “Kottinger Gardens”. The largest structures will be in the center of each site (separated by Kottinger Drive) at three stories. For the former Kottinger Place site, parking will surround the three-story structure to ease the transition to single family homes adjacent to the property. The former Pleasanton Gardens’ three story building will be similarly shielded and separated from existing single family homes adjacent to it.

PROJECT OBJECTIVES

MidPen engaged the Kottinger Place Redevelopment Task Force, Kottinger Place and Pleasanton Gardens Residents and neighbors to help create a plan that would best serve the residents and the community.

SITE LAYOUT

After considering a variety of building massing studies and unit configurations, the Task Force ultimately selected a preferred site plan for both Kottinger Place and Pleasanton Gardens that responded best to this feedback and met the Task Force’s objectives to increase the supply of affordable homes while retaining the site’s character and ensuring neighborhood compatibility.

In this plan, a new multi-story building on Kottinger Place is located toward the site’s northern edge, away from the single-family residences on Kottinger Drive, and tucked into the center of the site. The building’s height steps down to 1- and 2-stories at key locations on Vineyard Avenue and at key edge locations near the park and some of the single-story homes on the site. This reduces its impact on the neighbors living on and near Vineyard Avenue. Centering the 3-story portions in this way is the best way to minimize the impact on neighbors and frees up more space on the site for common outdoor amenities, such as community gardens. The single-story homes are located on the site’s southern and eastern edges in their existing location.

Similarly, in the site plan the Pleasanton Gardens site, the multi-story building is located on the site's edge at Kottinger Drive away from the area of the site that slopes upward. Like the Kottinger Place site, a new multi-story building on Pleasanton Gardens also steps down from 2- to 1-story at key locations to fit in with the neighborhood. In response to Task Force and resident feedback, all homes will be fully accessible.

The primary entrance to the Kottinger Place site will be from Vineyard Avenue and the secondary entrance will be from Kottinger Drive, in contrast to the current site plan which has no well-defined entry. Entering from Vineyard Avenue provides the best opportunity to create a welcoming entrance to the property which orients visitors and guests. At this entrance, clear signage delineating the new development from Kottinger Park will be incorporated. Given the feedback and MidPen's experience managing senior communities, the parking ratio for residents at Kottinger Place will be .8 cars to every home, which is the same as it is currently. In addition, the site plan includes the same number of parking stalls dedicated to Kottinger Park in roughly the same location as they are currently. The vehicular entrance to Pleasanton Gardens remains in its current location off of Kottinger Drive. The preferred plan for Development Approach 2 also creates a separate pedestrian entrance to Pleasanton Gardens from Kottinger Drive to avoid pedestrian access through the parking lot and better connect the two sites.

Surface parking will be located at the northern and southern edges of the Kottinger Place site. Locating the parking in these two areas serves two purposes from a site planning perspective. First, for the neighbors, it provides a setback and buffer from the multi-story building and single-story units. Second, for the Kottinger residents, it puts the parking close enough to their homes for easy access while ensuring the parking does not detract from the site's open space. The location of the parking on the Pleasanton Gardens site is designed to serve the same purposes.

New community rooms will be located on the first floor of the multi-story buildings, conveniently located at the center of each site. This provides for easy access to the planned outdoor community commons. In response to resident feedback, the community rooms will be designed to accommodate large groups of residents and offer more variety for programming, such as game nights, dance classes, and adult education classes.

Landscaping & Open Space

One of the Task Force's main objectives in considering the re-development of the Kottinger Place and Pleasanton Garden sites is to retain the character of the communities. During the course of Task Force discussions, members recognized that the openness of the sites, the common outdoor spaces and how they were used, the front porches that provide covered out-door space for residents to sit and enjoy the company of their neighbors, the mature trees, and the shared neighbor court-yards defined the character of the site.

As various site plan options were considered, the character and use of the existing open space on both sites was taken into account to ensure that the preferred site plan incorporated these same elements. As a result, the pre-ferred site plan aims to emulate the current open space uses on the site through the creation of shared neighbor courtyards, a large community commons, as well as to enhance the entrance and pedestrian circulation.

The specific open space elements will be more fully refined with resident and Task Force input as the design is fur-ther developed once a preferred redevelopment approach is selected.

Kottinger Place's Water Main

At present, a 16 inch water main runs from Kottinger Drive down the center of the site to Vineyard Avenue. In consultation with the City of Pleasanton's Operations Services Department, it has been determined that this water main will be abandoned during redevelopment in order to remain consistent with current water main standards. As a result, the project would be required to upgrade the existing water main running under First Street and make the connection to Vineyard Avenue at the same time. MidPen has received two preliminary estimates for this work, and has conservatively budgeted $275,000 to complete it.

Regalia Room

The Regalia Room located on Vineyard Avenue adjacent to the existing Kottinger Place site has served as a community building and meeting place. Currently, the Regalia House is used once per month for approximately 2 hours. City staff does not anticipate any change to this schedule. As a result, the preferred site plan does not include accommodation of a replacement of this space since the single use can be accommodated at another facility within the City. This allows the entire former Regalia House site to be incorporated into the new plan for Kottinger Place.

Green Building

MidPen is committed to green, sustainable development that incorporates a rigorous construction waste recycling program, cutting-edge green building methods, recycled content materials, and drought-tolerant landscaping. For MidPen, the commitment to sustainability also means reduced operating costs by incorporating solar photovoltaic panels to generate electricity, solar thermal systems to provide hot water on site, Energy Star rated appliances and fixtures, energy-efficient plumbing fixtures, and durable materials. Livability for residents will be enhanced by incorporating a variety of methods and materials to improve indoor air quality, such as the use of low-VOC paints and adhesives, formaldehyde-free building insulations, and incorporation of fresh air vents in every apartment.

OWNERSHIP

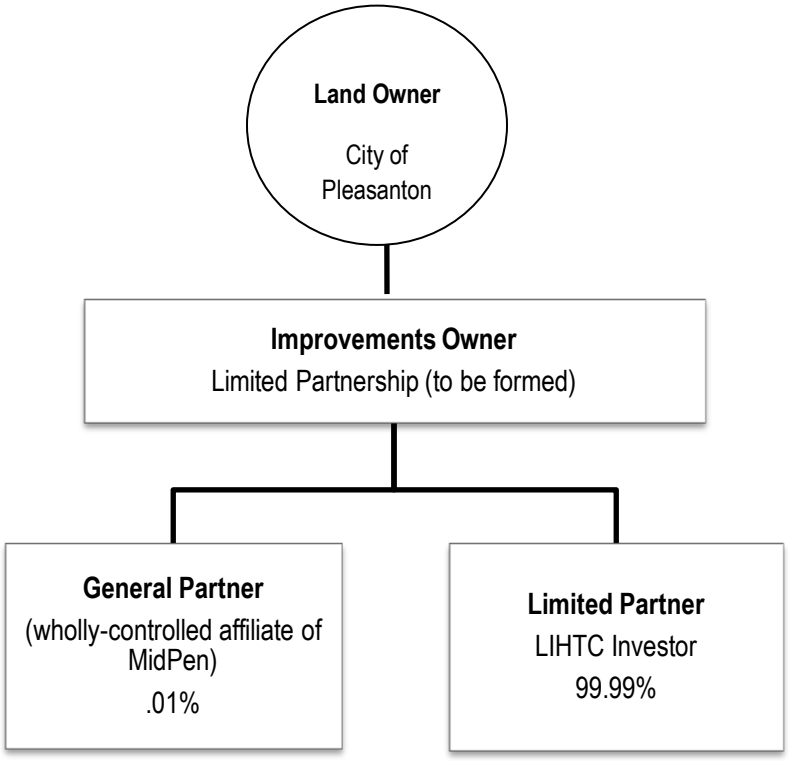
STRUCTURE

The proposed ownership outlined below has been structured to optimize competitiveness for available financing including Federal and State low-income housing tax credits and HUD financing.

MidPen proposes the City of Pleasanton retain fee interest in the 3.8 acre Kottinger Place site. The City will enter into a long-term ground lease with a limited partnership, described below, to develop and operate the building improvements. The term of the ground lease would be at least 55 years to coincide with the tax credit affordability period. The Board of Pleasanton Gardens has communicated their desire to convey their site to the City, at which point the same ownership structure would be put in place.

In order to sell the low-income housing tax credits (LIHTC) to an investor, MidPen will form a limited partnership. The partnership will consist of a non-profit corporation, wholly-controlled by MidPen Housing, which serves as the

managing general partner of the partnership with a .01% ownership interest. The LIHTC investor serves as the limited partner with a 99.9% ownership interest.



DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT PUBLIC HOUSING DISPOSITION

Kottinger Place is owned by the Housing Authority of the City of Pleasanton, and is therefore designated as Public Housing by the United States Department of Housing and Urban Development (HUD). In order to leverage low income housing tax credits, which provide an essential source of financing necessary to facilitate the redevelopment of the property, Kottinger Place will need to be released from the public housing inventory by HUD. MidPen has contracted with the California Housing Partnership Corporation (CHPC), a nationally-recognized affordable housing consultant providing technical assistance to Housing Authorities and non-profit developers on matters related to HUD, to analyze the strategies for this disposition. In all cases, rights of the existing residents would be protected via the process, and all residents would be provided with a replacement home on-site.

RELOCATION

In order to redevelop the sites, current residents will need to move temporarily during the reconstruction. MidPen is well versed in State and Federal Relocation laws and has completed numerous projects involving temporary relocation of low-income residents, including seniors. MidPen understands that the prospect of moving, even temporarily, can be daunting for seniors, particularly when the home they will return to will be different than the one they have known.

As a result, MidPen has gone to great lengths to both inform and educate residents about the moving process and has hired a professional relocation consultant to assist residents before and during the move.

Construction Phasing

In order to reduce the number of households who will need to move off-site during the redevelopment, MidPen studied various scenarios to phase the work and mitigate both the cost and disruption to residents. The costs associated with a longer construction schedule are offset by reduced relocation costs associated with being able to house some residents on site during construction of the new homes. Phasing plans are detailed separately for each of the development approaches in Sections 4-6 as they vary depending on the number of new units added and whether or not Pleasanton Gardens is redeveloped simultaneously with Kottinger Place.

Sensitivity to Residents' Needs

MidPen is focused on being sensitive to residents' needs during the relocation process. To this point, MidPen has already met individually with each household to discuss the proposed redevelopment of Kottinger Place, listen to their feedback, and begin to understand their relocation needs. MidPen and its Relocation Consultant, Autotemp, will continue to meet with residents to answer questions and provide updated information regarding the schedule and timeline for moving. Keeping residents informed is critical to relocation success for the residents and their families.

Guiding Residents through the Relocation Process

Each resident will receive two informational notices at least 180 and 90 days prior to their move, as well as the legally required notices closer to their move. These notices will not be a surprise to residents because MidPen will be holding ongoing meetings with the residents. MidPen's project manager and relocation consultant will proactively assist residents to make sure each resident received the notice and understands what it means. At the same time, residents will also receive specific instructions outlining what to expect before, during, and after the move, and what assistance they can expect.

MidPen Property Management and the development project manager will hold monthly informational meetings for residents who are temporarily relocated and for residents still living on the site as a way to provide construction schedule updates and help residents prepare for the move back to their renovated or new unit. MidPen will contract with translation services for all spoken and written communication, as necessary.

Resident Services

The Task Force clearly stated that any redevelopment on Kottinger Place and Pleasanton Gardens should include enhanced delivery of on-site services appropriate to seniors.

As a result, each development approach assumes a comprehensive level of resident service delivery provided by MidPen Resident Services Corporation. The operating structure for service delivery and components of this service program are detailed below. The cost for this program is incorporated into the financial analysis for each development approach.

With an annual investment of $4.5 million, an in-house staff of 65, and 300 service provider partners, MidPen Resident Services Corporation leads the affordable housing industry in delivering onsite programs, education, and services to MidPen's residents. MidPen Resident Services operates as a separate 501c3 organization and helps over 7,000 MidPen residents each year. Its main goal is to deliver services that help people measurably advance in all areas of their lives.

Comprehensive Service Provision

The Senior Services Manager, supervised by MidPen's Senior Services Program Director, will conduct mobility and mental health assessments to determine independent living ability. These assessments will inform the type and frequency of programming offered.

The Senior Services Manager will also be responsible for planning social events and quality of life programming to promote community interaction and prevent social isolation. This includes, but is not limited to the following:

- Holiday celebrations
- Game nights
- Computer education
- Fieldtrips to points of interest
- Support for gardening programs
- Nutrition groups
- On-site health screens through a vendor or in partnership with a nursing school
- One-on-one entitlement assistance
- Exercise and dance classes
- Connection to existing services in the community

Identifying Service Delivery Gaps in Pleasanton

In addition to providing direct services on site, MidPen Services Corporation also builds strong partnerships with community agencies to ensure that MidPen's programs are supplementing existing programs, rather than duplicating them. MidPen Services staff studied the report recently published by Resource Development Associates. This report, called the Eastern Alameda County Human Services Needs Assessment,1 was adopted by the City Council in June 2012. The study identified six key findings related to senior service delivery. After surveying 74 individuals representing 38 Eastern Alameda County organizations, the study concluded the following findings:

- Outreach is needed to help identify homebound seniors;
- Social isolation exacerbates mental and physical health issues and prevents access to services;

[1] Resource Development Associates, "Eastern Alameda County Human Services Needs Assessment", 2012, 62

- Many lower-income seniors do not meet income thresholds which would qualify them for critical services such as supportive housing;
- The cost and complexity of using public transportation prohibits many older adults from accessing critical services;
- There are no licensed Adult Day Health Care programs in the Tri-Valley to serve low-income seniors with health-related issues, and State budget cuts are eliminating such programs in neighboring communities;
- Currently, the Tri-Valley YMCA is in the process of renovating its facility to be used for implementing an adult day care social program; the date for the opening of the facility is yet to be determined.

These key findings underscore the need for on-site service delivery proposed by MidPen Resident Services. In addition to providing programs on-site that bring services directly to residents, the Senior Services Manager will be responsible for outreach and helping residents navigate available resources, such as those offered through the City of Pleasanton's Senior Center. As the redevelopment is closer to completion, MidPen Resident Services will conduct a thorough community assessment to ensure the services provided on-site are complimentary to those already offered in the City.

Providing More Affordable Living Opportunities For Seniors

The proposed redevelopment of the Kottinger Place site provides 120-130 new construction units in single and multi-story buildings, and the Pleasanton Gardens site provides 52-59 new construction units in single and multi-story buildings for a total of 172-189 units. This best meets the Task Force objective of increasing the amount of affordable senior housing in Pleasanton. This Approach responds to the overwhelming need for affordable senior housing in Pleasanton. At present, the Kottinger Place waiting list has over 85 applicants, and the Property Administrator receives about 20 calls daily from households looking for housing. The Pleasanton Gardens waiting list reopened in October 2011, and during a one-month period, the property received over 60 interested applicants. Both waitlists are currently closed.

Physically Connecting the Two Sites

In response to Task Force guidance, and strong desire for a cohesive community across the two sites, the site plan connects the sites by linking their pedestrian circulation and creating a common visual language. The Task Force is particularly interested in traffic calming measures that would allow residents to cross Kottinger Drive safely and confidently. While the final features and design need to be developed in collaboration with the Department of Public Works, traffic calming measures might include constructing one bulb out in the sidewalk on the Kottinger Place side of Kottinger Drive and another directly across from it on the Pleasanton Gardens side. These would provide a way to draw attention to the crosswalk between the two sites. The crosswalk will align with a landscaped path to Kottinger Park, allowing the crosswalk and path to become shared circulation for both sites. With pedestrian entries to both sites, it will be safer and more pleasant for residents to go between sites visiting with neighbors and enjoying shared indoor and outdoor amenities.

The two sites will also share architectural features and common landscaping particularly along the perimeters, within the gardens, and other outdoor common areas. The Task Force's vision for Development Approach Two includes a new, shared name for the combined development to further unify residents.

Proposed Unit Mix

Table 2 172-189 Affordable Senior Homes

Quantity	Unit Type	Approx. Size	Building Type
77	One-Bedroom	630 sf	Single-story
6	Two-Bedroom	880 sf	Single-story
80-93	One-Bedroom	630 sf	Multi-story
9-13	Two-Bedroom	880 sf	Multi-story

Proposed Phasing Plan and Relocation

The first construction phase will be the new construction of a 61-71-unit multi-story building on the northern portion of the Kottinger Place site and, subsequently, the new construction of 30 single-story homes on the site's eastern side. The second phase will be the new construction of 28 single-story homes on Kottinger Place, 24 single-story homes on Pleasanton Gardens, and 28 homes in a multi-story building on Pleasanton Gardens. The proposed 26-month construction schedule for Phase I allows for construction of the multi-story building during the first 14 months followed by the single-story homes during the second year. The following page includes a graphic depiction of the phasing plan.

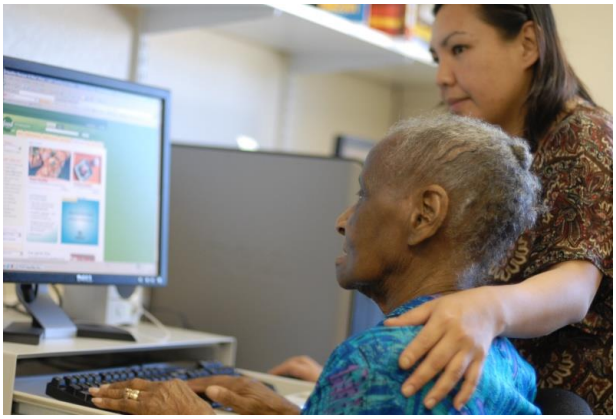
Phase 1 has two components, or sub-phases: first the multi-story building will be constructed, second the new single-story units will be constructed. The vacant Vineyard Avenue parcel and Regalia House site provide half of the land necessary for the multi-story building and associated parking. To create the remaining required land, 14 units need to be vacated. Constructing this building first minimizes the number of households that would need to be relocated during construction. When the multi-story building is complete, it will provide enough units (90+) for all of the Kottinger and Pleasanton Gardens residents to move into its new units. The second sub-phase of Phase 1 (30 single-story units) can then begin construction. Phase 2, on the remainder of Kottinger Place and all of Pleasanton Gardens will also be able to begin construction at this point.

When a relatively small number of units need to be vacated, as in the case of Phase 1, MidPen typically works with a property's management company to hold units vacant as residents move out, with the goal of creating the necessary number of vacancies, and eliminating the need for relocation during construction. If necessary, up to 14 existing households will be relocated off-site during the construction period. Given the off-site relocation, these households will receive assistance finding a replacement home and relocation benefits. Each household would receive a tenant protection voucher from HUD toward their rent payment. The monetary assistance from the project would be the gap payment, which is essentially the difference between the subsidy from HUD and the rent at their new apartment. According to relocation law, the tenants must be relocated to a comparable unit, which in this case will likely be a one-bedroom apartment in the City of Pleasanton. MidPen's relocation consultant would help each household find a new apartment, and make sure it meets with the resident's approval. Upon completion of phase one, the relocated households will receive first priority to move back to Kottinger Place.

Throughout the construction process, including on-site moves to facilitate phasing, all residents will receive moving assistance. The project will pay for all moving costs, and residents will receive help with setting up their utilities once the move occurs.

Constant communication with each resident ensures that relocation is handled thoughtfully. MidPen is committed to creating a relocation process will cause the least amount of disruption in the lives of the senior residents as possible. MidPen's successful experience with relocating senior households is built on, and the basis for, the protocols, individualized attention, in-house and third party expertise that it brings to each relocation process.

On-Site Staffing



In order to provide comprehensive on-site resident services at both sites, MidPen Resident Services proposes to staff the project with one full-time Senior Services Manager at the Kottinger Place site and one full-time Senior Services Manager at the Pleasanton Gardens site. Under the supervision of MidPen's Senior Services Program Director, the Services Managers will work together to coordinate on-site service delivery and provide much of the direct programming. Programming will encourage residents living on each site to take advantage of opportunities at both locations. The initial resident outreach and community-building activities will help assess the best ways to connect residents and address specific individual needs.

MidPen Property Management will have a staff presence on both sites. There will be one full-time manager, two full-time assistant managers, one full-time maintenance technician, and two on-site resident manager s (one for each site) available during evenings and weekends. This staffing level will ensure both sites remains in exceptional condition, residents' needs are met, and the development continues to be a good neighbor and important part of the Pleasanton community.

PROJECT CHARACTERISTICS

Relocation

See above description on project phasing and relocation plans for residents.

Demolition

Existing improvements including 90 senior housing units, Regalia House and associated parking, landscaping and amenities will be demolished prior to redevelopment of the site.

Construction

All four parcels will be developed with a total of 172-189 units. Parking, landscaping and open space will be provided for residents and guests.

PLANNING AND ZONING CONSISTENCY

GENERAL PLAN

With a General Plan Amendment, the project will be consistent with the City of Pleasanton General Plan including the Housing Element as stating in the Goals, Policies and Programs cited below.

During the past two decades, Pleasanton has experienced a diverse pattern of growth including substantial new residential, commercial, office, and industrial development. As a small suburban city, Pleasanton has developed a reputation as a desirable place in which to live and work, with an excellent school system, fine parks and recreational facilities, a traditional downtown area, and a low crime rate.

As in other Bay Area communities, providing housing, especially affordable housing, has become a major issue in Pleasanton. The shortage of affordable housing particularly affects lower-income renters and first-time homebuyers, including those residents who have grown up in Pleasanton and would like to establish their own households here. The City has always tried to grow in a balanced manner, providing a variety of land uses, jobs as well as residences, and sufficient public facilities, services, and infrastructure to accommodate its residents and workers. The City has also been active in promoting housing affordability through its support of non-profit providers, creation of housing programs, and participation in and approval of subsidized residential developments. Pleasanton's challenge over the next five years is to continue providing housing affordable to all segments of the community, to preserve the quality of the housing stock, to maintain a balance between employment and housing, and to continue to grow at a rate which allows its public facilities, services, and infrastructure to accommodate its residents, workers, and visitors to the community.

The following Goals and Policies from the Pleasanton General Plan, Housing Element apply to the project:

Goal 6:	**Promote the production of housing affordable to extremely low-, low- and very-low-income households by actively working with and creating incentives for non-profit housing developers.**

Policy 9:	Support the development and rehabilitation of housing affordable to extremely low-, low- and very-low-income households and review infrastructure needs.

Program 9.1: Conduct a review of the Growth Management Program and amend as necessary to assure the rate of residential development is consistent with the City's current and new infrastructure capacities, including roadways, water, sewer, and facilities, etc. The objective of this program is to assure that the City's Growth Management Program is consistent with State law, that there is a procedure for assuring that there is available infrastructure to serve future approved residential development, and to create a more efficient process for implementing the program.

Program 9.4: Continue to provide incentives such as reduced development fees, assistance in public improvements, priority in permit processing, increased density, altered site-development standards, mortgage revenue bonds, affordable-housing competition, and other creative incentives to encourage the development of housing affordable to moderate-, low-, extremely low-, and very-low-income households. A priority will be

placed on projects that provide the largest number of units at the greatest level of affordability. The availability of incentives is incorporated in the City's Inclusionary Zoning Ordinance, but for specific projects, will also be promoted through the City's web site, in local newspapers, and through posting at public places subject to normal procedures. The objective of this program is to assure that incentives are made available and known to the development community.

Program 9.5: Seek creative alternative and non-traditional means, including using available City financial and property resources and working cooperatively with community groups, that will assist in the production of or preserve housing for extremely low-, very-low-, low-, and moderate-income- households.

Program 9.7: Adopt Development Standards and Design Guidelines to facilitate the development of high quality multifamily housing and to create more certainty for residential development on Sites 25 through 33 in Appendix B Housing Sites Inventory. These standards are intended to be substantially similar to those developed for the Hacienda TOD (sites 22, 23 and 24) and would at a minimum include affordability consistent with the City's Inclusionary Zoning Ordinance and the acceptance of Section 8 Rental Assistance Vouchers as set forth in the City's standard affordable housing agreement.

Policy 10:	Give greater priority to providing housing which is affordable to extremely low income households and to households at the low end of the low-income range (50 to 80 percent of median income).

Policy 11:	Strive toward meeting Pleasanton's share of regional housing needs, as defined by the Regional Housing Needs Determination (RHND).

Program 11.1: Maintain zoning adequate to accommodate Pleasanton's share of the regional housing need for all income levels. Sites designated High Density Residential or Mixed Use shall be developed at a minimum density of 30 units per acre, and comport with the development standards and design guidelines set forth in Program 9.7.

Goal 9:	**Process housing proposals affordable to extremely low-, low- and very-low-income households and use available City programs and incentives so as to promote and facilitate housing affordability for low- and very-low-income households.**

Goal 10:	**Remove unnecessary governmental constraints to the provision of housing affordable to extremely low-, low- and very-low-income households and associated public services and facilities.**

Policy 14:	Make appropriate modifications to the Land Use Element of the General Plan, Zoning Ordinance, and other City ordinances, programs, and policies to facilitate the provision of housing, especially housing affordable to moderate-, low-, and very-low-income households.

Policy 20:	Work with Alameda County Housing Authority and other agencies to maintain funding for Section 8 and other Federal subsidy programs.

Goal 17:	**Identify and make special provisions for the community's special-housing needs.**

Policy 41:	Provide for the special-housing needs of large households, the elderly, persons with disabilities, extremely low income households, the homeless, farmworkers, and families with single-parent heads of households.

Program 41.1: Continue to provide housing opportunities for households with special needs such as studio and one-bedroom apartments for the elderly and single-person households, three-bedroom apartments for large households, specially designed units for persons with disabilities, SRO's, emergency shelter and transitional housing for the homeless, and units affordable to extremely low-, low- and very-low-income households with single-parent heads of households. The City will continue to make available funding from sources such as the City's Lower-Income Housing Fund, and the City's Federal HOME and CDBG grants to assist local non-profit agencies and housing developers. The City will also provide technical support to agencies to seek other sources of funding and to plan and develop housing for persons with special needs.

Policy 42:	Investigate and solicit information on senior citizen housing issues so that the senior population of Pleasanton has access to housing which meets their needs as the population ages.

Policy 43:	When considering City funding for housing affordable to low- and very-low-income households, consider the goal of building units affordable to low- and very-low-income households and senior units affordable to low- and very-low-income households in proportion to the need.

Kottinger Senior Housing (proposed project) will make a positive impact in addressing this serious local need for affordable senior housing by adding a net increase of 82-99 units. Source Documentation: [(2)]

ZONING

The following are the zoning designations for each subject parcel:

Kottinger Place (APN 094-0095-033-03)	RM-25	Multiple Family Residential, 2,500 square foot lot/per unit
Pleasanton Gardens (APN 094-0019-017)	RM-25	Multiple Family Residential, 2,500 square foot lot/per unit
4138 Vineyard Ave (APN 094-0095-017)	RM-4	Multiple Family Residential, 4,000 square foot lot/per unit

4153 Regalia Court (APN 094-0095-034[2]) R-1-65 Single Family Residential, 6,500 square foot minimum lot

REQUESTED ACTIONS AND REQUIRED APPROVALS

This Joint IS/EA will be used to provide decision-makers and the general public with relevant environmental information about the project. The Joint IS/EA will be used by the County and the City when considering approval of the project. Approvals required for implementation of the project include, without limitations, the following.

KOTTINGER APPROVALS

- General Plan Amendment
- Zoning Change
- Tree Removal Permit
- Demolition Permits
- Grading Permits
- Building Permits

OTHER AGENCY APPROVALS

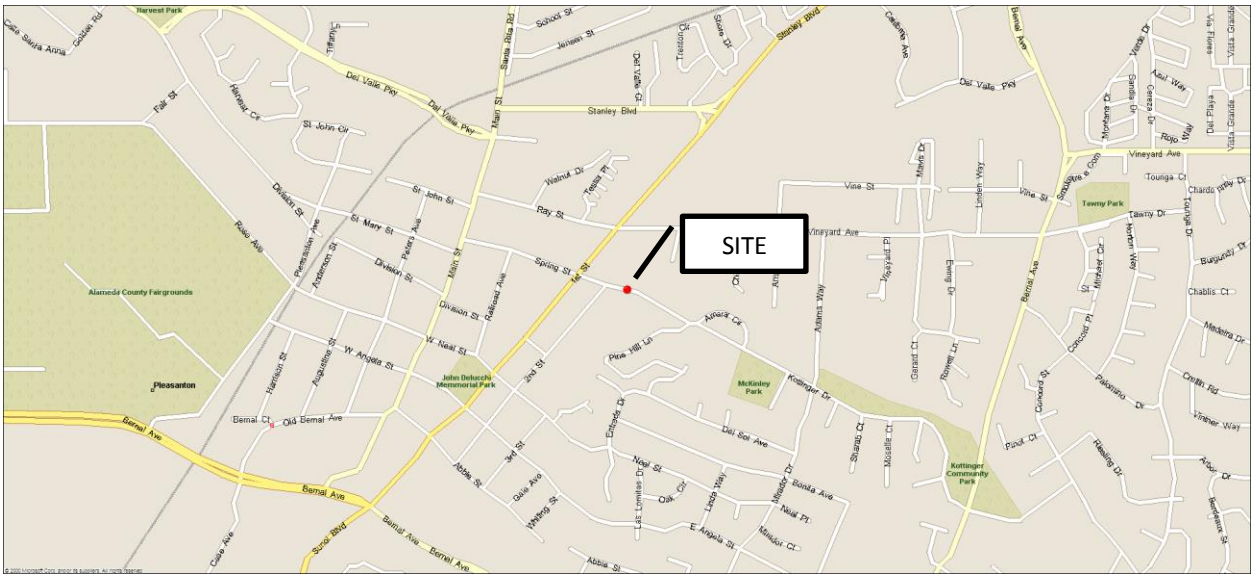
The project sponsor is seeking federal funds from the U.S. Department of Housing and Urban Development (HUD) through Alameda County. As part of the federal process, the proposed project requires federal environmental review pursuant to NEPA. Pursuant to this process, the following additional approval will be required for the project:

- Alameda County approval of the adequacy of the NEPA document, acting as a responsible entity for environmental review, decision-making and actions pursuant to NEPA that would otherwise apply to HUD.

[2] This parcel is part of Kottinger Village Community Park and is yet to be sub-divided.

PROJECT LOCATION

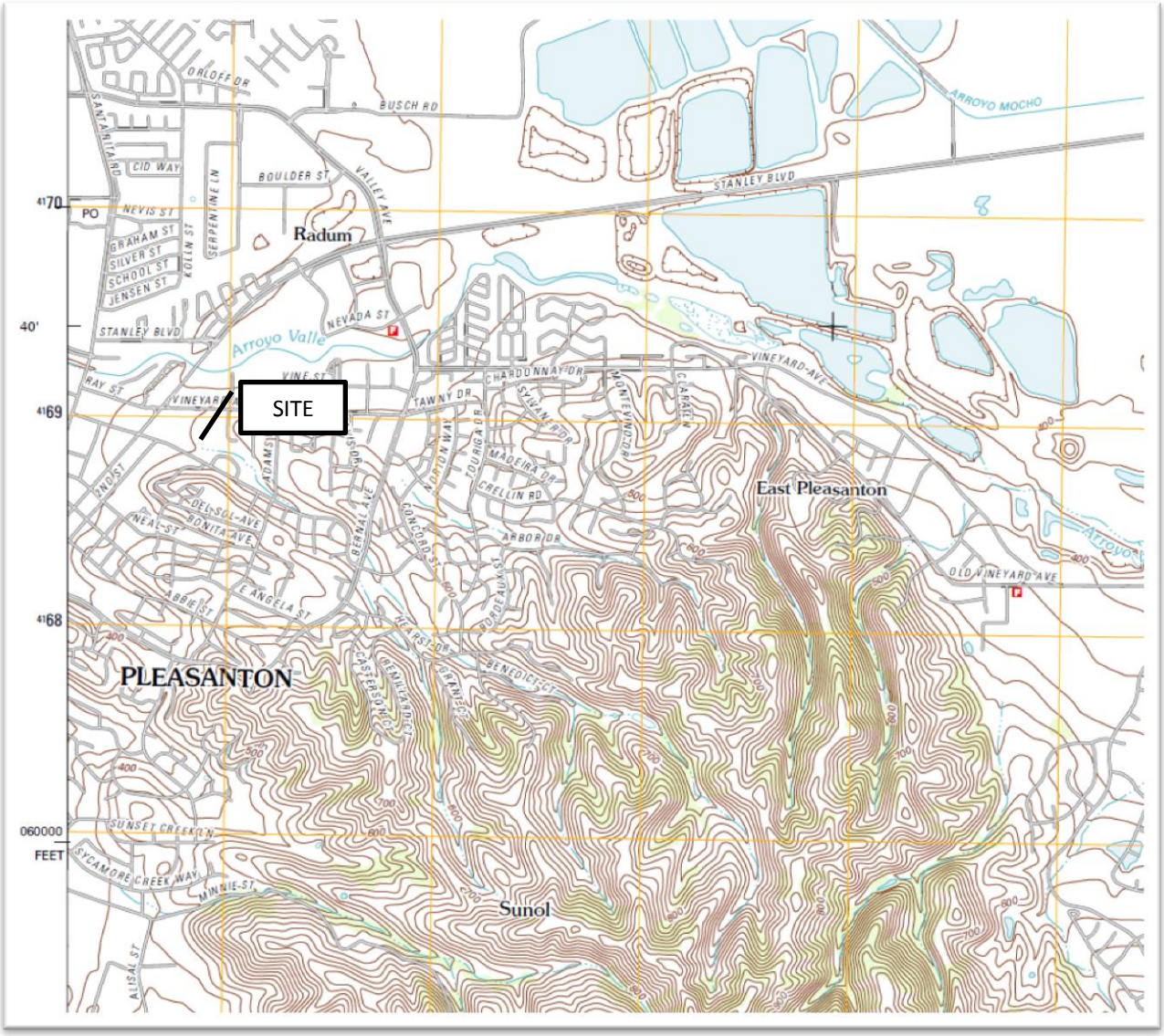
Map 3.1 Region



Map 3.2 Detail

Map 3.3 Aerial View (Courtesy BING 3D Maps)

Figure 1 Site Plan



Map 3.4 USGS Livermore 7.5' Quadrangle (Excerpt)

CHAPTER 4. – INITIAL STUDY CHECKLIST – ALL OTHER ENVIRONMENTAL TOPICS

Pursuant to NEPA Guidelines and CEQA Guidelines Section 15063, the following sections provide an evaluation of whether the project will have any significant effects on the environment.

If an environmental issue would not be affected by the project it is identified in the following evaluation as "no impact".

A "Less than Significant/No Adverse Impact" response indicates that while there may be potential for an environmental impact, there are standard procedures or regulations in place, or other features of the project as proposed, which would limit the extent of this impact to a level of Less than Significant/No Adverse Impact.

If an environmental issue may cause a significant effect on the environment, but the Applicant has agreed to implement mitigation measures that would reduce this impact to a Less than Significant/No Adverse Impact level, it is identified in the following evaluation as "Less than Significant/No Adverse Impact with mitigation" and these new measures are specifically identified.

If an environmental issue may cause a significant effect on the environment, but the Lead Agency has devised Standard Conditions of Approval that, if implemented, would reduce this impact to a Less than Significant/No Adverse Impact level, it is identified in the following evaluation as "Less than Significant/No Adverse Impact with Standard Conditions of Approval" and these conditions are specifically identified.

If an environmental issue may cause a significant effect on the environment, it is identified in the following evaluation as "potentially significant" and will be analyzed in a project-level EIR.

I. AESTHETICS Would the project:	*Potentially Significant Impact*	*Less than significant with Mitigation*	*Less than significant*	*No Impact*
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X	
c) Substantially degrade the existing visual character or quality of the site and surroundings?			X	
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?			X	

SETTING

The project site is comprised of four parcels bisected by Kottinger Drive and backs to adjacent residential homes and Kottinger Village Community Park. The project parcels are comprised of Pleasanton Gardens affordable senior housing, Kottinger Place affordable senior housing, Regalia House (City-owned facility), and a vacant lot.

IMPACTS

a) SCENIC VISTAS

MidPen engaged a Task Force comprised of Kottinger Place and Pleasanton Gardens residents and neighbors to help create a site plan that would best serve the residents and the community. After considering a variety of building massing studies and unit configurations, the Task Force ultimately selected a preferred site plan for both Kottinger Place and Pleasanton Gardens that responded best to this feedback and met the Task Force's objectives to increase the supply of affordable homes while retaining the site's character and ensuring neighborhood compatibility. In addition, MidPen commissioned their architect to create multiple visual simulations of the project from entrances and various perspectives, especially views from Kottinger Village Community Park and from neighbors.

KOTTINGER PLACE

In this plan, a new multi-story building on Kottinger Place is located toward the site's northern edge, away from the single-family residences on Kottinger Drive, and tucked into the center of the site. The building's height steps down to 1- and 2-stories at key locations on Vineyard Avenue and at key edge locations near the park and some of the single-story homes on the site. This reduces its impact on the neighbors living on and near Vineyard Avenue. Centering the 3-story portions in this way is the best way to minimize the impact on neighbors and frees up more space on the site for common outdoor amenities, such as community gardens. The single-story homes are located on the site's southern and eastern edges in their existing location.

Figure 2 Visual Simulation - View of Entrance from Vineyard Avenue

Figure 3 View from Vineyard Avenue Neighbors

Figure 4 View from Kottinger Village Community Park

Figure 5 View from Kottinger Drive Neighbors

Pleasanton Gardens

Similarly, in the site plan for the Pleasanton Gardens site, the multi-story building is located on the site's edge at Kottinger Drive away from the area of the site that slopes upward. Like the Kottinger Place site, a new multi-story building on Pleasanton Gardens also steps down from 2- to 1-story at key locations to fit in with the neighborhood.

Figure 6 View of Entrance to Pleasanton Gardens

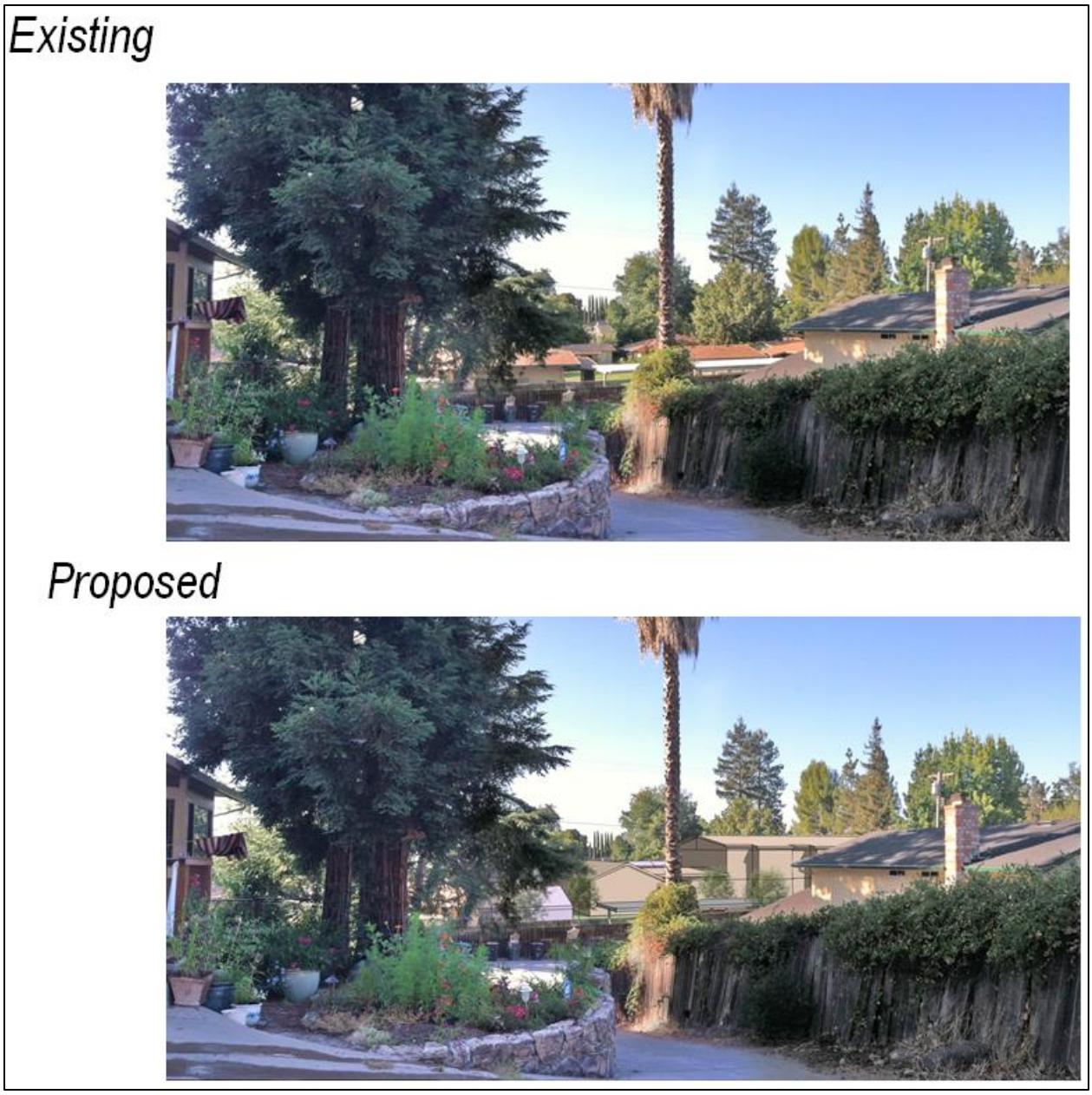


Figure 7 View from Adjacent Neighbors to the South

Figure 8 Second View from Southern Neighbors

Figure 9 View from Second Street Neighbors

The project's impact given the site design sensitivity to any scenic vista is ***less than significant*** over current conditions. Source documentation: [(3) (4)]

b) SCENIC HIGHWAYS

The project site is not located along or can be viewed from, any scenic highway. There is ***no impact*** in this regard. Source documentation: [(3) (5) (6)]

d) LIGHT AND GLARE

The project sponsor has not yet submitted a lighting plan. In order to reduce the potential light and glare impacts to less than significant levels, a lighting plan should be submitted for this project to include measures such as en-

suring exterior lighting features shine in a downward manner, not shining above the horizontal plane, and having cut-off shields on outdoor or driveway lighting to direct lighting from the site away from the night sky and adjacent property, etc. The lighting plan should demonstrate that the project will not result in substantial new sources of lighting or glare, adversely affecting day or nighttime views. Streetlights shall be installed at the locations shown on plans approved by Alameda County and the City of Pleasanton. Impacts on light and glare from this project will be reduced to ***less than significant*** levels. Source documentation: [3]

SHADOWS

No sensitive receptors such as residential structures, outdoor commercial or civic uses such as outdoor restaurants, plazas, or parks would get mid-morning to mid-afternoon shadows from these buildings. Early morning and later afternoon/evening shadows are considered less than significant. The effect of shadows created onto the project itself by the buildings is considered less-than-significant. Source documentation: [4]

At present there is no evidence to suggest that any buildings surrounding the project site currently utilize passive solar heat collection systems; however, the completion of this project would not preclude the installation of such systems by any surrounding buildings in the future. Therefore, there would be no impact in this regard. Source documentation: [4] [5]

The project site is not a historic resource[3]. There are no historic resources in the Area of Potential Effects; therefore no shadowing of historic resources will occur as a result of the project. Source documentation: [7] [8]

[3] *Please see section V. 'Cultural Resources' for a complete evaluation of historic resources.*

II. AGRICULTURE AND FORESTRY RESOURCES Would the project:	*Potentially Significant Impact*	*Less than significant with Mitigation*	*Less than significant*	*No Impact*
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?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
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))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of forest land to non-forest use?				X

SETTING

The project site and surrounding urban area is currently improved with buildings and structures.

IMPACTS

a) through e) AGRICULTURAL SOILS

The project site is located in an urban area. All four subject parcels are currently developed and improved with structures. The site is not used for agricultural purposes; therefore there would be ***no impact*** to agricultural resources as a result of this project. Source documentation: [9]

III. AIR QUALITY Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	*Potentially Significant Impact*	*Less than significant with Mitigation*	*Less than significant*	*No Impact*
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	
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)?			X	
d) Expose sensitive receptors to substantial pollutant concentrations?			X	
e) Create objectionable odors affecting a substantial number of people?			X	
f) Result in a substantial increase in diesel emissions?		X		

SETTING

REGULATORY SETTING

The Federal Clean Air Act governs air quality in the United States. In addition to being subject to federal requirements, air quality in California is also governed by more stringent regulations under the California Clean Air Act. At the Federal level, the United States Environmental Protection Agency (USEPA) administers the Clean Air Act (CAA). The California Clean Air Act is administered by the California Air Resources Board (CARB) at the State level and by the Air Quality Management District at the regional and local levels. The Bay Area Air Quality Management District (BAAQMD) regulates air quality at the regional level, which includes the nine-county Bay Area.

For consistency with local air quality management, the Bay Area Air Quality Management District BAAQMD standards were used to evaluate impacts for several pollutants. For air quality, the analysis considers whether the Proposed Action or alternatives would:

1) Conflict with the Clean Air Act General Conformity Rule;
2) Emit a criteria pollutant or precursor that exceeds local thresholds for construction or operation;
3) Exceed local standards for fugitive dust emissions during construction;
4) Exceed carbon monoxide standards during operation;
5) Expose sensitive receptors to health risks in excess of local thresholds;

6) Exceed local $PM_{2.5}$ standards for new residential development; or
7) Expose a substantial number of people to odor emissions.

The federal Clean Air Act requires each state to identify areas that have ambient air quality in violation of federal standards. States are required to develop, adopt, and implement a state implementation plan (SIP) to achieve, maintain, and enforce federal ambient air quality standards in these nonattainment areas. SIP elements are developed on a pollutant-by-pollutant basis whenever one or more air quality standards are being violated. In California, local and regional air pollution control agencies have primary responsibility for developing SIPs, generally in coordination with local and regional land use and transportation planning agencies. The Bay Area Air Quality Management District (BAAQMD) is the responsible regional air pollution control agency in the San Francisco Bay Area.

An area's compliance with national ambient air quality standards under the Clean Air Act is categorized as nonattainment, attainment (better than national standards), unclassifiable, or attainment/cannot be classified. The unclassified designation includes attainment areas that comply with federal standards, as well as areas for which monitoring data are lacking. Unclassified areas are treated as attainment areas for most regulatory purposes. Simple attainment designations generally are used only for areas that transition from nonattainment status to attainment status. Areas that have been reclassified from nonattainment to attainment of federal air quality standards are automatically considered maintenance areas, although this designation is seldom noted in status listings. The San Francisco Bay Area is designated as nonattainment for the federal 8-hour ozone standard and the 24-hour fine particulate matter ($PM_{2.5}$) standard. The San Francisco Bay Area is designated as attainment or unclassified for the other national ambient air quality standards.

With respect to the state ambient air quality standards, California classifies areas as attainment, nonattainment, nonattainment-transitional, or unclassified. The San Francisco Bay Area is designated as nonattainment for the state ozone, inhalable particulate matter (PM_{10}) and $PM_{2.5}$ standards and as attainment or unclassified for the other state ambient air quality standards. The predominant regulation that guides assessment of air quality impacts of federal actions is the General Conformity Rule, established under the Clean Air Act (Section 176(c)(4)). The General Conformity Rule ensures that the actions taken by federal agencies in nonattainment and maintenance areas do not interfere with a state's plans to meet national standards for air quality. The project area is located within the San Francisco Bay Area Air Basin, which is designated as a nonattainment area for the federal 8-hour ozone standard and the federal fine particulate matter ($PM_{2.5}$) standard. The air basin is designated as a maintenance area with respect to the federal carbon monoxide (CO) standards.

In keeping with the General Conformity Rule process, the appropriate *de minimis* thresholds of the Rule as they apply to the San Francisco Bay Area Air Basin for ozone precursors, $PM_{2.5}$, and CO are applied. The *de minimis* thresholds for these three pollutants in the San Francisco Bay Area Air Basin are 100 tons per year for each pollutant.

TOXIC AIR CONTAMINANTS

Toxic Air Contaminants (TAC) are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer) and include, but are not limited to, the criteria air pollutants listed above. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., benzene near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, state, and federal level.

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about two- thirds of the cancer risk from TACs (based on the statewide average). According to the CARB, diesel exhaust is a complex mixture of gases, vapors and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the state's Proposition 65 or under the federal Hazardous Air Pollutants programs.

CARB reports that recent air pollution studies have shown an association that diesel exhaust and other cancer-causing toxic air contaminants emitted from vehicles are responsible for much of the overall cancer risk from TACs in California. DPM emitted by diesel-fueled engines was found to comprise much of that risk. DPM can be distributed over large regions, thus leading to widespread public exposure. Diesel engines emit particulate matter at a rate about 20 times greater than comparable gasoline engines. The vast majority of diesel exhaust particles (over 90 percent) consist of $PM_{2.5}$, which are particles that can be inhaled deep into the lung. Like other particles of this size, a portion will eventually become trapped within the lung possibly leading to adverse health effects. While the gaseous portion of diesel exhaust also contains TACs, CARB's 1998 action was specific to DPM, which accounts for much of the cancer-causing potential from diesel exhaust. California has adopted a comprehensive diesel risk reduction program to reduce DPM emissions 85 percent by 2020. The U.S. EPA and CARB adopted low sulfur diesel fuel standards in 2006 that reduce diesel particulate matter substantially.

CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of DPM. Several of these regulatory programs affect medium and heavy duty diesel trucks that represent the bulk of DPM emissions from California highways. These regulations include the solid waste collection vehicle (SWCV) rule, in-use public and utility fleets, and the heavy-duty diesel truck and bus regulations.

In December 2008 the CARB approved a new regulation to reduce emissions of DPM and nitrogen oxides from existing on-road heavy-duty diesel fueled vehicles. The regulation requires affected vehicles to meet specific performance requirements between 2011 and 2023, with all affected diesel vehicles required to have 2010 model-year engines or equivalent by 2023. These requirements are phased in over the compliance period and depend on the model year of the vehicle.

BUFFER ZONES

The BAAQMD recommends that general plans include buffer zones to separate sensitive receptors from sources of air toxic contaminants and odors. In June 2010, CARB released the final version of the Air Quality and Land Use Handbook (10), which is intended to encourage local land use agencies to consider the risks from air pollution prior to making decisions that approve the siting of new sensitive receptors (e.g., schools, homes or daycare centers) near sources of air pollution. Unlike industrial or stationary sources of air pollution, siting of new sensitive receptors does not require air quality permits, but could create air quality problems. The primary purpose of the handbook is to highlight the potential health impacts associated with proximity to common air pollution sources, so that those issues are considered in the planning process. CARB makes recommendations regarding the siting of new sensitive land uses near freeways, truck distribution centers, dry cleaners, gasoline dispensing stations, and other air pollution sources. These "advisory" recommendations include setbacks of 500 feet between new residences and freeways. The setbacks are based primarily on modeling information and are not reflective of site-specific conditions in Pleasanton. Siting of new sensitive land uses within these recommendation distances may be possible, but only after site-specific studies are conducted to identify the actual health risks. CARB

acknowledges that land use agencies have to balance other siting considerations such as housing and transportation needs, economic development priorities and other quality of life issues.

The Bay Area Air Quality Management District (BAAQMD) Clean Air Plan is the regional air quality management plan for the San Francisco Bay Area (11). The Clean Air Plan accounts for projections of population growth provided by the Association of Bay Area Governments and vehicle miles traveled provided by the Metropolitan Transportation Commission, and it identifies strategies to bring regional emissions into compliance with federal and State air quality standards.

BAAQMD THRESHOLDS OF SIGNIFICANCE

Bay Area Air Quality Management District (BAAQMD or District) California Environmental Quality Act (CEQA) Guidelines is to assist lead agencies in evaluating air quality impacts of projects and plans proposed in the San Francisco Bay Area Air Basin (SFBAAB). The Guidelines provides BAAQMD-recommended procedures for evaluating potential air quality impacts during the environmental review process consistent with CEQA requirements.

The SFBAAB is currently designated as a nonattainment area for state and national ozone standards and national particulate matter ambient air quality standards. SFBAAB's nonattainment status is attributed to the region's development history. Past, present and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

Table 3 BAAQMD Thresholds of Significance

Analysis	New Source	New Receptor
Individual Project	Compliance with qualified community risk reduction plan OR To the nearest receptor (resident) regardless of distance: Increased Cancer Risk > 10 in a million Increased Chronic and Acute Hazard Index > 1.0 Ambient $PM_{2.5}$ concentration Increase > 0.3 ug/m^3	Compliance with qualified community risk reduction plan OR From the source with the highest cancer risk, $PM_{2.5}$ concentration, or hazard in comparison to other sources within the 1,000 foot radius of the receptor: Increased Cancer Risk > 10 in a million Increased Chronic and Acute Hazard Index > 1.0 Ambient $PM_{2.5}$ concentration increase > 0.3 ug/m^3
Cumulative Impacts	Compliance with qualified community risk reduction plan OR	Compliance with qualified community risk reduction plan OR

	Common sources within 1,000 foot radius of the individual project modeled to the maximum likely exposed individual (resident) based on the individual source analysis: Cancer Risk > 100 in a million Chronic Hazard Index > 10.0 $PM_{2.5}$ concentration > 0.8 ug/m^3	Major sources within 1,000 foot radius of the receptor: Cancer Risk > 100 in a million Chronic Hazard Index > 10.0 $PM_{2.5}$ concentration > 0.8 ug/m^3

If emissions of TACs or $PM_{2.5}$ exceed any of the Thresholds of Significance listed in Table 4, the proposed project would result in a significant impact. Source documentation: [12]

Alameda County does not have a qualified risk reduction plan. The site, and any future project to be constructed on that site, would be located near a freeway or major arterial highway, an analysis of TAC and $PM_{2.5}$ impacts upon sensitive receptors is necessary.

IMPACTS

a) through d) AIR QUALITY ASSESSMENT

In June 2013, an Air Quality Assessment was performed for the project by Vern Miller of AEM Consulting. A summary of their results follow and the report in its entirety can be found in Appendix A.

For purposes of risk and hazards for new sources and receptors for individual project, the zone of influence is a 1,000-foot radius from property line of the source or receptor. This new threshold is effective May 1, 2011.

Major roadways are defined by the BAAQMD as having at least 10,000 average annual daily traffic (AADT). Roadway traffic count data is available from the local congestion management authority.

The only Roadway having at least 10,000 average daily traffic within I,000 feet of the project site is First Street located 450 feet to the west of the nearest building. The BAAQMD recently updated the impacts from highways throughout the Bay Area. The interactive tool allows users to use different segments of the highways to view estimated risk and hazard impacts that represent the average annual daily traffic (AADT) count, fleet mix, and other modeling parameters specific to that segment of the highway. The estimated risk and hazard impacts are also modeled at two different heights, 6 ft. and 20 ft., allowing users to estimate the risk when receptors are located at the ground level vs. the second floor of a building. This modeling uses the 20 foot height.

The initial Highway Screening shows a cancer risk of 1.53 in a million. The Threshold of Significance is less than 10 in a million. The exposure of new residents to mobile sources of $PM_{2.5}$ and other Toxic Air Contaminates is ***less than significant.*** Source documentation: [13]

Table 4 Average Annual Daily Traffic - First Street

	Average Daily Traffic	Nearest Distance	PM2.5	Segment Factor	Cancer Risk
First Street	19,800	480 '	0.039	0.32	1.53

Table 5 Air Quality Thresholds of Significance - Mobile Sources

Thresholds of Significance - Mobile Sources			
PM2.5 Concentration	0.039 ug/m^3	0.3 ug/m^3	No
Cancer Risk	1.53 in a million	10 in a million	No
Chronic Non-cancer Hazard	0.000	1	No
Acute Non-cancer Hazard	0.000	1	No

STATIONARY SOURCES

Using the screening tool for Alameda County Permitted Sources updated to 2011 the BAAQMD recognizes only one stationary permitted source within 1,000 feet of the subject property, Pacific Bell located at 120 Ray Street.

Initial screening using the BAAQMD dataset shows the Pacific Bell emergency generator has a cancer exposure risk of 51.5 which exceeds the threshold limits of 10:1,000,000. The Pacific Bell building is located approximately 730 feet to the west of the nearest exposed building. The BAAQMD uses a Diesel Internal Combustion (IC) Engine Distance Multiplier Tool. This distance multiplier tool refines the screening values for cancer risk and $PM_{2.5}$ concentrations found in the District's Stationary Source Screening Analysis Tool for permitted facilities which contain only diesel IC engines, to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

Table 6 Stationary Sources

Distance (meters)	Distance (feet)	Distance Adjustment Multiplier	Enter Cancer Risk Estimate	Adjusted Cancer Risk Estimate	Enter PM2.5 Concentration	Adjusted PM2.5 Concentration
220	722	0.07	51.5	3.605	0.0917	0.006419

Applying the distance adjustment Shows an Adjusted Cancer Risk Estimate of 3.605 which falls below the 10:1,000,000 threshold. Furthermore the Adjusted $PM_{2.5}$ Concentration is 0.006419 which falls below 0.3 ug/m^3.

The exposure of new residents to stationary sources of $PM_{2.5}$ and other Toxic Air Contaminates is ***less than significant.*** Source documentation: [13]

CARBON MONOXIDE HOTSPOTS

No CO hotspots are anticipated as a result of traffic generated emissions by the proposed project in combination with existing or cumulative traffic. Therefore, the mobile-related emissions from the project are not anticipated to contribute substantially to an existing or projected air quality violation and would not expose sensitive receptors to substantial pollutant concentrations. Impacts would be ***less than significant***. Source documentation: [13]

e) OBJECTIONABLE ODORS

As a residential development project designed for low-income seniors, the project is not expected to create a source of objectionable odors. Impacts are ***less than significant.*** Source documentation: [13]

f) DIESEL EMISSIONS

Construction of the project would result in the temporary generation of NOx and PM_{10} emissions. Short-term air quality impacts are mostly due to dust (PM_{10}) generated by construction and development activities, and emissions from equipment and vehicle engines (NOx) operated during these activities. Dust generation is dependent on soil type and soil moisture, as well as the amount of total acreage actually involved in clearing, grubbing and grading activities. Clearing and earthmoving activities comprise the major source of construction dust generation, but traffic and general disturbance of the soil also contribute to the problem. Sand, lime or other fine particulate materials may be used during construction, and stored on-site. If not stored properly, such materials could become airborne during periods of high winds. The effects of construction activities include increased dust fall and locally elevated levels of suspended particulates. PM_{10} is considered unhealthy because the particles are small enough to inhale and damage lung tissue, which can lead to respiratory problems. PM_{10} emissions during project construction can be reduced through compliance with institutional requirements for dust abatement and erosion control.

Sources of air emissions and dust that could result from the construction of the project include activities such as grading, vehicle travel on paved and unpaved surfaces, and vehicles and equipment exhaust.

Although the project-generated traffic would not result in a significant long-term impact on local or regional air quality, short-term construction impacts could represent an adverse impact without mitigation. Sources of air emissions and dust include activities such as grading, vehicle travel on paved and unpaved surfaces, and vehicles and equipment exhaust.

The project's construction activities are not expected to substantially change existing air quality standards or contribute to any existing or projected air quality violation. With the implementation of standard construction practices required by the City of Pleasanton, and any mitigation measures that may be required by the BAAQMD and contained in the conditions of approval, potential air quality related impacts would be consistent with the City's LCP/LUP and would be reduced to a less than significant level According to the BAAQMD CEQA Guidelines, a project that would not individually have a significant air quality impact may have significant cumulative impacts. The determination as to whether a project would have a significant cumulative impact is based on the evaluation of the consistency of the project with the local General Plan and the consistency of the General Plan with the Bay Area Clean Air Plan (CAP). The project, with mitigation measures, would be consistent with the City's LCP/LUP. The LCP/LUP is consistent with the CAP, therefore, the project would pose no significant cumulative air quality impacts.

PM_{10} emissions during project construction can be reduced through compliance with institutional requirements for dust abatement and erosion control. The effect is ***less than significant with mitigation***. Source documentation: [13]

DEMOLITION

The existing structures on all three developed parcels will be demolished before redevelopment of the site to accommodate the Kottinger Senior Housing project. Please see the 'Hazards and Hazardous Materials' section for a discussion of materials that may be disturbed during demolition of the existing structures. Source documentation: [14]

MITIGATIONS

The following are mitigations that will bring the temporary degradation of air quality during construction to a level of less than significant:

Air Quality

Ongoing throughout site preparation and construction:

AQ1. Water all active construction areas as needed to minimize dust;

AQ2. Cover all trucks hauling soil, sand, and other loose materials;

AQ3. Apply water as needed, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at the construction site;

AQ4. Sweep daily (using water sweepers, as necessary) all paved access roads, parking areas and staging areas at construction site as directed by the County Engineer; and

AQ5. Sweep streets as necessary (with water sweepers) if visible soil material is carried onto adjacent public streets, as directed by County Engineer.

IV. BIOLOGICAL RESOURCES Would the project:	*Potentially Significant Impact*	*Less than significant with Mitigation*	*Less than significant*	*No Impact*
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 or U.S. Fish and Wildlife Service?			X	
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?			X	
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, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			X	
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?			X	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
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?			X	

SETTING

The project is redevelopment of two existing senior housing developments; development of one vacant 0.50-acre parcel; redevelopment of one parcel with an existing structure for a total of 6.2 acres. The project is an infill development in an urban area. Three of the project parcels are improved. The proposed project will include the redevelopment of 172-189 affordable senior apartments. The project includes the removal of the structures currently on-site. The site is adjacent to Kottinger Village Community Park.

REGULATIONS

Sensitive Biological Communities

Sensitive biological communities include habitats that fulfill special functions or have special values, such as wetlands, streams, or riparian habitat. These habitats are protected under federal regulations such as the Clean Water Act; state regulations such as the Porter-Cologne Act, the California Department of Fish and Wildlife (CDFW) Streambed Alteration Program, and the California Environmental Quality Act; or local ordinances or policies such as city or county tree ordinances, Special Habitat Management Areas, and General Plan Elements.

Special-Status Plant and Wildlife Species

Special-status species include those plants and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA). These acts afford protection to both listed and proposed species. In addition, California Department of Fish and Wildlife (CDFW) Species of Special Concern, which are species that face extirpation in California if current population and habitat trends continue, U.S. Fish and Wildlife Service (USFWS) Birds of Conservation Concern, and CDFW special-status invertebrates, are all considered special-status species. Although CDFG Species of Special Concern generally have no special legal status, they are given special consideration under the California Environmental Quality Act (CEQA). In addition to regulations for special-status species, most birds in the United States, including non-status species, are protected by the Migratory Bird Treaty Act of 1918. Under this legislation, destroying active nests, eggs, and young is illegal. Plant species on California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (Inventory) with California Rare Plant Ranks (Rank) of 1 and 2 are also considered special-status plant species and must be considered under CEQA. Rank 3 and Rank 4 species have little or no protection under CEQA.

Preservation Plans and Policies

There is no Habitat Conservation Plan or similar habitat conservation plan for the project area.

IMPACTS

b) and c) *Biological Communities*

There are no wetlands, waterways, creeks, vernal pools, coastline or riparian habitat on the subject parcels. Source documentation: [(15) (16)]

The majority of the project area is developed, including landscaped areas. The developed area is primarily devoted to senior housing accommodations, though it also includes one public facility (Regalia House) and one undeveloped parcel of 0.50 acres in size.

There are no existing biological communities on the project site; therefore, impacts to biological communities are considered to be ***less than significant***.

a) and d) *Special-Status Wildlife Species*

Of the special-status wildlife species whose occurrences are tracked by the California Natural Diversity Database or CNDDB, two are listed as Threatened (California tiger salamander and San Joaquin kit fox) and one is Endangered (plamate-bracted bird's-beak, a plant). Most of the special-status species known from the vicinity occur in specific, native habitat types that do not occur within the Study Area (e.g., tidal wetlands, perennial ponds).

The Federal U.S. Fish and Wildlife Service lists the following Endangered and Threatened Species for the Livermore Quadrangle:

Invertebrates:	Conservancy fairy shrimp *(Branchinecta conservation)* Longhorn fairy shrimp *(Branchinecta longiantenna)* vernal pool fairy shrimp *(Branchinecta lynchi)*
Fish:	delta smelt *(Hypomesus transpacificus)* Central Valley steelhead *(Oncorhynchus mykiss)*
Amphibians:	California tiger salamander *(Ambystoma californiense)* California red-legged frog *(Rana draytonii)*
Reptiles:	Alameda whipsnake *(Masticophis lateralis euryxanthus)*
Birds:	California least tern *(Sternula antillarum browni)*
Mammals:	San Joaquin kit fox *(Vulpes macrotis mutica)*
Plants:	Palmate-bracted bird's-beak *(Cordylanthus palmatus)*

The project is redevelopment of existing improvements in an infill area that is urbanized. The potential to affect any listed species is ***less than significant.***

e) and f) *Preservation Plans and Policies*

There is no Habitat Conservation Plan or similar habitat conservation plan for the project area. The nearest channel of water is the Arroyo Valle, approximately 700 feet from the eastern edge of the Kottinger Place parcel (and Vineyard Avenue). The U.S. Fish and Wildlife National Wetlands Inventory Mapper lists this as PSSC:

P System **PALUSTRINE**: The Palustrine System includes all nontidal wetlands dominated by trees, shrubs, emergent, mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean derived salts is below 0.5 ppt. Wetlands lacking such vegetation are also included if they exhibit all of the following charactereists: 1. are less than 8 hectares (20 acres); 2. do not have an active wave-formed or bedrock shoreline feature; 3. have at low water a depth less than 2 meters (6.6 feet) in the deepest part of the basin; 4. have a salinity due to ocean-derived salts of less than 0.5 ppt. Subsystem:

SS Class **SCRUB-SHRUB**: Includes area dominated by woody vegetation less than 6 m (20 feet) tall. The species include true shrubs, young trees (saplings), and trees or shrubs that are small or stunted because of environmental conditions. Subclass:

C WATER REGIME **Seasonally Flooded**: Surface water is present for extended periods especially early in the growing season, but is absent by the end of the growing season most years. The water table after flooding ceases is variable, extending from saturated to the surface to a water table well below the ground surface.

Runoff from the site during and after construction would have a very limited effect on habitat on and near Arroyo Valle, and standard requirements for protection of stormwater quality and runoff reduction (see Section VIII, Hydrology and Water Quality) are expected to minimize such effects to a ***less than significant*** level. Source Documentation: [15] [17] [18] [19]

SUMMARY OF CONCLUSIONS

The Study Area is composed entirely of developed habitat. No sensitive plant communities or jurisdictional waters were identified within the Study Area. Source documentation: [15] [16] [18] [19]

V. CULTURAL RESOURCES Would the project:	*Potentially Significant Impact*	*Less than significant with Mitigation*	*Less than significant*	*No Impact*
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?			X	
b) Cause a substantial adverse change in the significance of an archeological resource pursuant to §15064.5?		X		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		
d) Disturb any human remains, including those interred outside of formal cemeteries?		X		

SETTING

INTRODUCTION

The analysis presented in this chapter focuses on historic resources, primarily on the architectural history of the site and prehistoric cultural resources (archaeology) of the site. The Historic Resources Analysis contained in this chapter is based upon the evaluation of the project site conducted by AEM Consulting, the Northwest Information Center and Tom Origer & Associates, which addresses the impacts of the proposed project (see Appendix C).

REGULATORY SETTING

FEDERAL: NATIONAL HISTORIC PRESERVATION ACT OF 1966 (AS AMENDED)

The National Historic Preservation Act (NHPA) of 1966 establishes a program to preserve historic properties throughout the U.S. and, among other things, authorizes the Secretary of the Interior to expand and maintain a National Register of Historic Places composed of districts, sites, buildings, structures, and objects significant in American history, architecture, archaeology, engineering, and culture. The National Register is administered by the National Park Service, which is part of the U.S. Department of the Interior.

In general, properties listed in the Register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture, and that:

a. Are associated with events that have made a significant contribution to the broad patterns of U.S. history; or

b. Are associated with the lives of persons significant in the past; or

c. Embody distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

d. Have yielded, or may be likely to yield, information important in prehistory or history.

In general, cemeteries, birthplaces, or graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance within the past 50 years shall not be considered eligible for the National Register.

California Register of Historic Places

In order for a resource to meet the criteria for listing in the California Register of Historical Resources, it must satisfy all of the following three provisions:

1. It meets one or more of the following four criteria of significance:

    - The resource is associated with events or patterns of events that have made a significant contribution to the broad patterns of local and regional history;

    - The resource is associated with the lives of persons important to the nation or to California's past;

    - The resource embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values; or

    - The resource has the potential to yield information important to the prehistory or history of the State or the nation (this criterion applies primarily to archaeological sites).

2. The resource retains historic integrity (defined below); and

3. It is fifty years old or older (except for rare cases where it can be demonstrated that sufficient time has passed to understand the historical importance of the resource).

The California Register regulations are similar to the criteria used by the National Park Service for the National Register of Historic Places. Any resource listed on or formally determined to be eligible for listing on the National Register is automatically listed on the California Register.

The California Register defines "integrity" as "the authenticity of a property's physical identity, evidenced by the survival of characteristics that existed during the property's period of significance." A property must, therefore, retain enough of its historic character or appearance to be recognizable as an historical resource. California Register regulations specify that integrity is a quality that applies to historic resources in seven ways: location, design, setting, materials, workmanship, feeling, and association. A property must retain most of these qualities to possess integrity.

HISTORIC CONTEXT AND SETTING

The project site lies in a residential area of Pleasanton, near to downtown Pleasanton. The four project parcels are surrounded by residential land uses to the west, north and south and Kottinger Park to the east. One parcel, currently Pleasanton Gardens is west of Kottinger Drive, the other three parcels are on the east side of Kottinger Drive. The project parcel is adjacent to twenty-seven (27) other parcels, most of which contain single family homes constructed in the early to mid-20th century, and one is a park.

PROJECT PARCELS

The subject property consists of one city-owned senior housing development, one privately-owned senior housing development, a vacant lot and a city owned building. The site is located on the north and south sides of Kottinger Drive in a mixed commercial and residential area of Pleasanton, California. The property totals approximately 6.2 acres and is improved with 29 one-story buildings totaling approximately 54,300 square feet. The subject property is currently occupied by a city owned building (Regalia House), Kottinger Place senior apartments (50 units), Pleasanton Gardens senior apartments (40 units) and a vacant lot. In addition to the subject property buildings, the property is improved with tenant garden areas, asphalt-paved parking areas and associated landscaping.

MidPen proposes to demolish the existing improvements and redevelop the site with 172-189 units of affordable senior housing to be known as “Kottinger Place” and “Pleasanton Gardens”. The largest structures will be in the center of each site (separated by Kottinger Drive) at three stories. For Kottinger Place, parking will surround the three-story structure to ease the transition to single family homes adjacent to the property. Pleasanton Gardens’ three story building will be similarly shielded and separated from existing single family homes adjacent to it.

ADJACENT PARCELS

The Area of Potential Effects (APE) includes the subject site and twenty-seven other properties that surround and face the subject site. The APE was determined by including all properties adjacent to the project and within eyeshot. In each case the entire parcel was included. See map of the Area of Potential Effects (APE) below.

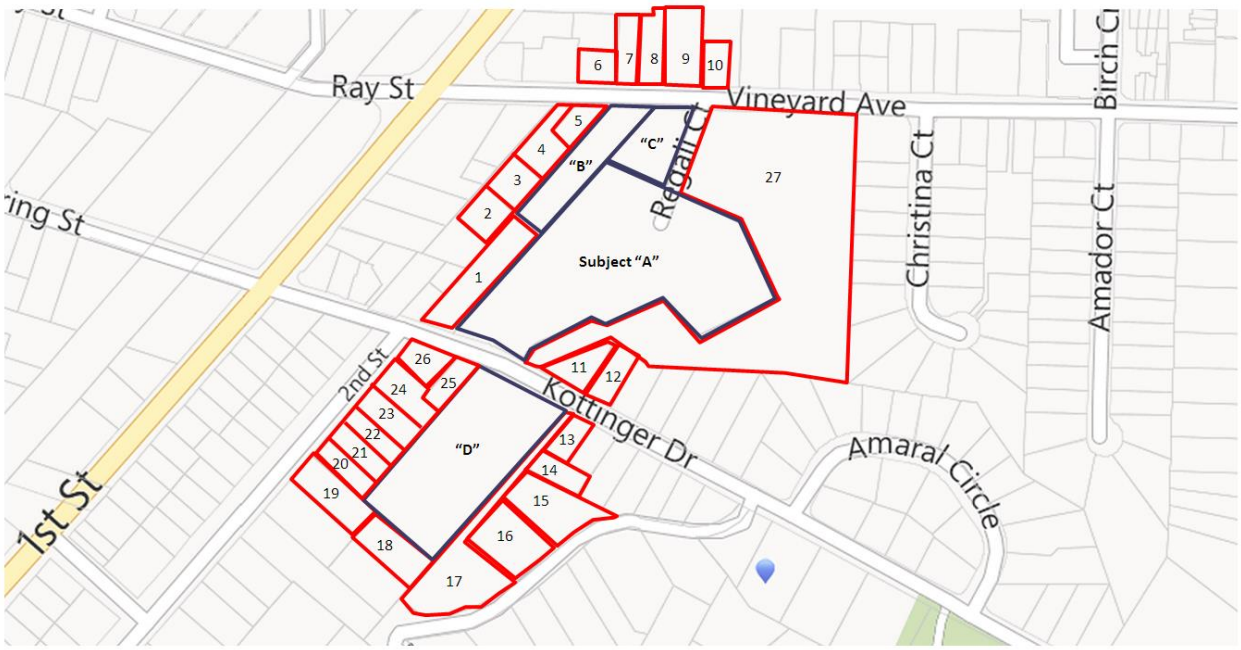


Figure 10 Area of Potential Effects (APE)

SUBJECT PROPERTY A

Subject property A is occupied by Kottinger Place affordable senior housing constructed in 1973. This complex is less than 50 years old. While the National Register program provides for the inclusion of properties younger than 50 years they must be of exceptional importance. This property does not meet that standard.

SUBJECT PROPERTY B

Subject property B is a vacant lot that was occupied by a residence, but it was demolished in 2005 when purchased by the City of Pleasanton. As a vacant parcel, it holds no discernible historic or cultural resources.

SUBJECT PROPERTY C

Subject property C contains the city-owned Pleasanton Women's Club/Regalia House. This clubhouse appears to be a mid-20th century building, and was probably part of the earlier Kottinger Village complex. The USGS 1951 map of this area depicts the earlier development and a building is shown at the location of the clubhouse. This building is a rectangular, frame structure with a slightly peaked, gabled roof. The entry is on the east side of the building and is a simple stoop with a shed roof. Cladding is stucco. Windows are primarily two-light, wood-sashed, sliding windows topped by a band of fixed windows. Cladding is stucco. This building is unlikely to meet the eligibility criteria for inclusion in the National Register.

SUBJECT PROPERTY D

Subject property D is occupied by Pleasanton Gardens affordable senior housing project constructed in 1969. This complex is less than 50 years old and does not meet the "exceptionally important" standard required for inclusion in the National Register.

APE PROPERTY #1

APE #1 is a quadruplex built between 1999 and 2000. As the age is 14 years old, this property will not be evaluated further for historic importance.

APE PROPERTY #2, #3 AND #4

Parcels 2, 3, and 4 are situated on a private street off of Vineyard Avenue and contain duplexes built in 1963 using identical plans. All are frame buildings with stucco siding and aluminum-sashed windows. These Ranch-style dwellings have low, hipped-roofs and long, rectangular footprints. They are not architecturally distinctive and are not likely to meet National Register eligibility criteria.

APE PROPERTY #5

Parcel 5 has a 1910, Spanish Eclectic dwelling with a flat, parapetted roof. The front of the house features large, arched windows that mimic the arched entryway. Wings extend from the core of the house and have small courtyards enclosed by high walls. This house could be eligible for the National Register if formally evaluated.

APE PROPERTY #6

The single-family residence on Parcel 6 is a Ranch-style building constructed in 1962. It is a frame structure clad with stucco, and has a hipped roof. At present the windows are double-hung, vinyl-clad sashes. It appears that this house was a duplex (similar to those on Parcels 2 through 4) that has been renovated. One of the two central garages has been enclosed and the wall plan on the east end extended to match the front edge of the garage. The roof has been reconfigured to account for the added space. This building is unlikely to meet the eligibility criteria for inclusion in the National Register.

APE PROPERTY #7

Parcel 7 has a small, front-gabled frame building with a hipped roof stoop. At present the building has vinyl-clad windows and is clad with stucco. This building is unlikely to meet the eligibility criteria for inclusion in the National Register.

APE PROPERTY #8

Parcel 8 contains a front-gabled, frame dwelling with wood panel siding. The entryway has a simple stoop with a separate gabled roof. Windows are aluminum-sashed fixed and sliding windows. County records indicate that it was constructed in 1951. This building is unlikely to meet the eligibility criteria for inclusion in the National Register.

APE PROPERTY #9

Parcel 9 has a two-story apartment complex constructed circa 1960. This building has a rectangular plan with an end-gabled roof. Windows are aluminum and vinyl-sashed. This building is unlikely to meet the eligibility criteria for inclusion in the National Register.

APE PROPERTY #10

APE #10 is a single family residence built in 1992. As the age is only 21 years old, it will not be evaluated further in this report.

APE PROPERTY #11, #12, #13, AND #14

The dwellings on Parcels 11 through 14 were constructed in the early 1950s as part of the post-war building boom. Most are modest, one-story, frame structures with low-pitched gabled roofs. Cladding includes a mix of lapped boards and stucco with brick or faux stone trim. The exception is the two-story home on Parcel 14 that appears to have been renovated in recent years. These buildings are unlikely to meet the eligibility criteria for inclusion in the National Register.

APE PROPERTY #15

APE #15 is a single family residence built in 1977 and 1978, making it 36 years old. As the age is less than 50, this property will not be discussed further.

APE PROPERTY #16

APE #16 is a single family residence built in 1977 and 1978, making it 36 years old. As the age is less than 50, this property will not be discussed further.

APE PROPERTY #17

The house on Parcel 17 is a 1959, gable-roofed, frame building with vertical boards and battens clad-ding the lower part of the house and lapped siding in the gables. This is not an architecturally distinctive building and is unlikely to meet the eligibility criteria for inclusion in the National Register.

APE PROPERTY #18

APE #18 is a single family residence built in 1979 and 1980, making it 34 years old. As such, it will not be evaluated for historical significance.

Parcels 19 through 26 face 2nd Street and their construction dates range from the late-19th to the mid-20th century.

APE PROPERTY #19

The house on Parcel 19 is a Craftsman home constructed in 1910. It features a gabled roof with a separate gabled roof over the front porch. Decorative brackets are at the gable ends. Porch supports are simple wood columns with brick bases. Windows at the front of the house appear to have been changed to large-paned fixed windows. This building is unlikely to meet the eligibility criteria for inclusion in the National Register.

APE PROPERTY #20

Parcel 20 has a very modest, hipped roof dwelling with no real ornamentation. The exterior is stucco and the windows are newer, vinyl-clad sashes. This building is unlikely to meet the eligibility criteria for inclusion in the National Register.

APE PROPERTY #21

Parcel 21 contains a 1951, frame house on a rectangular plan. The roof is cross-hipped and the exterior has lapped siding with brick trim. This building is unlikely to meet the eligibility criteria for inclusion in the National Register.

APE PROPERTY #22

County records indicate that the house on Parcel 22 was constructed in 1890; however, its Tudor style suggests that it is from the 1920s or 30s. This house has a steeply pitched, gabled roof with cross gables and gabled dormers. Cladding is stucco. Windows at the front of the house are large, fixed panes. Elsewhere they are one-over-one double-hung sashes. The garage at the rear of the parcel mimics the style of the house. If the county's construction date for this house is correct, it has been modified extensively and it is unlikely to meet the eligibility criteria for inclusion in the National Register.

APE PROPERTY #23

The house on Parcel 23 is a hipped-roof, Craftsman home with a full-width porch beneath the principal roof. Porch supports are tapered columns. The windows at the front of the house are typical Craftsman-style windows with multiple panes in the upper sash and a single pane in the lower. This house is not an especially good example of the Craftsman style and is unlikely to meet the eligibility criteria for inclusion in the National Register.

APE PROPERTY #24

APE #24 is a single family residence built in 2007. As it is only 6 years old, it will not be discussed further.

APE PROPERTY #25 AND #26

The buildings on Parcels 25 and 26 are vernacular homes built in 1890. Both were built on a hall-and-parlor plan with side-gabled roofs that extend low over the front porch. The house on Parcel 26 appears to have been raised to accommodate a sub-ground space, possibly a basement. Craftsman-style, tapered porch supports have been added to the front porch. At present, it is clad with stucco and the windows are vinyl, double-hung sashes. This building is highly modified and is unlikely to meet the eligibility criteria for inclusion in the National Register.

In contrast to the house on Parcel 26, the hall-and-parlor home on Parcel 25 appears little changed except for an addition at the rear. The original part of the house retains its cove-rustic, drop siding and six-over-six, double-hung windows. The front of the house has a shed roof supported by simple posts over the full-width stoop. This is one of the early buildings constructed in this area. It retains good integrity and is likely to meet the criteria for inclusion in the National Register.

APE PROPERTY #27

Parcel 27 is Kottinger Village Community Park, which was part of the Kottinger Village housing development of the 1940s; however, there are no surviving elements from that time.

NORTHWEST INFORMATION CENTER

Archival research included examination of the library and project files at Tom Origer & Associates. A review (NWIC File No. 12-0836) was completed of the archaeological site base maps and records, survey reports, and other materials on file at the Northwest Information Center (NWIC), Sonoma State University, Rohnert Park.

Archival research found that there had been no previous survey of the project area, and that there are known resources within a one-mile radius.

There are no reported ethnographic sites within or near the project area.

Archival research found no buildings or structures within the APE that are listed on federal, state, or local registers. Review of historical maps found no evidence of buildings or structures within or near the APE before 1904 when the United States Geological Survey (USGS) mapped the area. By 1904, there were several houses within the APE and by 1951, The Kottinger Village housing development had been constructed between Vineyard Avenue and Kottinger Drive.

NATIVE AMERICAN CONSULTATION

The Native American Heritage Commission was contacted on March 1, 2013 with a letter request for a search of records regarding scared lands and other cultural sites within the project area. The Native American Heritage Commission responded on March 15, 2013 with a letter sent via FAX stating that a record search of the sacred land file failed to indicate the presence of Native American cultural resources in the immediate project area. The Commission enclosed a list of Native American individuals and organizations to contact who may have knowledge of cultural resources in the project area. Subsequently, a letter was sent to each contact on March 19, 2013 initiating tribal consultation related to historic properties. To date, no response has been received. Source Documentation: (20) (21) (22) (23) (24)

IMPACTS

a) Built Environment

A survey of buildings on and surrounding the proposed project found that most would not be eligible for inclusion in the National Register; however, Parcels 5 and 26 contain buildings that could be found eligible if formal evaluations were completed. The house on Parcel 5 is a good and early example of Spanish Eclectic architecture.

The hall-and-parlor home on Parcel 26 is one of the earliest houses built in this area and it retains good historical integrity.

In assessing potential project effects on these properties, existing conditions, proposed conditions, and the proximity of the project to the two potentially eligible buildings were considered. At present, both homes are in areas of high development with surrounding buildings that compromise the integrity of their settings. Removing the existing housing complexes and building new structures on those sites will not further affect their National Register eligibility.

The results of survey and evaluation were summarized in a Historic and Cultural Resources Evaluation for Section 106 Review. Alameda County, agency official, concurred with the precise description of the undertaking and the Area of Potential Effects. The agency official concurred with the recommended determination that no historic properties will be adversely affected by the undertaking. The reason is the historic properties that appear eligible for inclusion in the National Register of Historic Places in the Area of Potential Effects will not be adversely affected by the undertakings. On May 9, 2013 the California State Historic Preservation Officer, Dr. Carol Roland-Nawi, did not object to the County's determination. Source Documentation: [(7) (25) (26) (27)]

b) through d) ARCHEOLOGY

The APE for archeology is the site footprint.

There is the possibility that buried archaeological materials could be found during redevelopment of the site. If buried materials are encountered, all soil disturbing work should be halted at the location of any discovery until a qualified archaeologist completes a significance evaluation of the find(s) pursuant to Section 106 of the National Historic Preservation Act (36CFR60.4). Impacts are considered ***less than significant with mitigation***. Source Documentation: [(7) (28)]

MITIGATIONS

CULTURAL RESOURCES

CR1. There is the possibility that buried archaeological materials could be found. If buried materials are encountered, all soil disturbing work should be halted at the location of any discovery until a qualified archaeologist completes a significance evaluation of the find(s) pursuant to Section 106 of the National Historic Preservation Act (36CFR60.4). Prehistoric archaeological site indicators expected within the general area include: chipped chert and obsidian tools and tool manufacture waste flakes; grinding and hammering implements that look like fist-size, river-tumbled stones; and for some rare sites, locally darkened soil that generally contains abundant archaeological specimens. Historical remains expected in the general area commonly include items of ceramic, glass, and metal. Features that might be present include structure remains (e.g., cabins or their foundations) and pits containing historical artifacts.

CR2. In the event that human skeletal remains are uncovered at the project site during construction or ground-breaking activities, all work shall immediately halt and the Alameda County Coroner shall be contacted to evaluate the remains, and shall follow the procedures and protocols pursuant to Section 15064.5 (e)(1) of the CEQA Guidelines. If the County Coroner determines that the remains are Native American, the City shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, and all excavation and site preparation activities shall cease within a 50-foot radius of the find until appropriate arrangements are made. If the agencies determine that

avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume construction activities. Monitoring, data recovery, determination of significance and avoidance measures (if applicable) shall be completed expeditiously.

VI. GEOLOGY AND SOILS Would the project:	*Potentially Significant Impact*	*Less than significant with Mitigation*	*Less than significant*	*No Impact*
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 Publication 42.			X	
ii. Strong seismic ground shaking?		X		
iii. Seismic-related ground failure, including liquefaction?			X	
iv. Landslides?			X	
b) Result in substantial soil erosion or the loss of topsoil, creating substantial risks to life, property, or creek/waterways?		X		
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?		X		
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?		X		
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X

SETTING

In March 2013, a Geotechnical Investigation for Kottinger Senior Housing was prepared by AMSO Consulting Engineers (see Appendix D). This section summarizes their findings and conclusions.

The report presented the results of geotechnical investigation for the Kottinger Residential Development proposed for construction on the following properties in Pleasanton, California.

- 251 Kottinger Drive, (Pleasanton Gardens Parcel)

- 240 Kottinger Drive, (Kottinger Place Parcel)
- 4138 Vineyard Avenue, and
- Regalia Parcel, a City owned property

MidPen Housing Corp proposes to construct residential development consisting of a mix of one story and multi-stories buildings. Interior asphalt concrete paved driveways will provide access from Kottinger Drive and Vineyard Avenue to the parking areas outside the buildings.

GEOLOGICAL CONDITIONS

A review of the published geologic map of the site and vicinity shows the Kottinger Place parcel to be underlain by Qpaf, Alluvial Fan and Fluvial Deposits (Pleistocene) and Qpaf1, Alluvial Terrace Deposits (Pleistocene). Both deposits consist of brown or tan, medium dense to dense, gravely sand or sandy gravel that generally grades upward, to sandy or silty clay. This was confirmed by all of the shallow exploration borings performed by AMSO Consulting Engineers.

Subsurface conditions under the proposed buildings were explored by means of eleven small diameter exploration borings. The exploration borings were drilled to between 5 feet and 35 feet below existing ground surface. Within the depths of exploration, the native soils at the site consist of clay, silt and sand.

251 Kottinger Drive

The 251 Kottinger Drive property was found to be underlain by a thin layer of silty clay (CL) of low plasticity and low potential for expansion. This layer of clay is underlain by loose to medium dense layer of silty clayey sand that extends to a depth of about 10 feet. This layer of sand was not encountered with exploration hole B-3 located near the southeast corner of the property. Below this layer of sand the site is underlain by alternating layers of silty clay and silty sand with gravels.

Ground water was only encountered in exploration holes B-1 at a depth of about 7½ feet and in exploration hole B-2 at a depth of about 16 feet below existing ground surface.

240 Kottinger Drive

The 240 Kottinger Drive property is underlain by a layer of silty and sandy clay with low plasticity and low potential for expansion. This layer of clay extends to a depth of between 5 and 8 feet and is underlain by dense silty fine sand with fine gravel with an average thickness of about 6 feet and is underlain by silty clay that extends to the maximum depth of exploration.

No ground water was encountered in any of the exploration drill holes within this property.

IMPACTS

a) i. RUPTURE OF AN EARTHQUAKE FAULT

The project site is located within the seismically active San Francisco Bay region but outside any of the Alquist-Priolo Earthquake Fault Zones. The following faults are closest to the site.

Table 7 Distance to Alquist-Priolo Earthquake Fault Zones

Fault	Distance to Fault Miles	Distance to Fault Kilometers	Maximum Moment Magnitude
CALAVERAS (No. of Calaveras)	2.3	3.7	6.8
HAYWARD (Total Length)	8	13	7.1
GREENVILLE	10	16	6.9
CONCORD – GREEN VALLEY	17	27	6.9
HAYWARD (SE Extension)	13	22	6.4
CALAVERAS (So. of Calaveras)	16	26	6.2

Seismic hazards can be divided into two general categories, hazards due to ground rupture and hazards due to ground shaking. Since no active faults are known to cross the subject property, the risk of earthquake-induced ground rupture occurring across the project site appears to be remote.

Since no faults are believed to cross the site, the hazard of ground rupture is considered ***less than significant.*** Source Documentation: [29]

a) ii. STRONG SEISMIC GROUND SHAKING

Based on historic records and on the known general seismicity of the San Francisco Bay region, AMSO Consulting Engineers considers it probable that during the next 50 years the site will be shaken by at least one earthquake of Richter Magnitude 6.5 or greater, and by numerous earthquakes of lesser Magnitude, all having epicentral locations within about 20 miles of the site.

Should a major earthquake occur with an epicentral location close to the site, ground shaking at the site will undoubtedly be severe, as it will for other property in the general area. Note that structural seismic design is not intended to eliminate damage to a structure. The goal of the design system is to minimize the loss of human life. It is unlikely that any structure can be designed to withstand the forces of a great earthquake without any damage at all.

CALIFORNIA BUILDING CODE SEISMIC DESIGN PARAMETERS

Site Class: **D** (Stiff Soil Profile)

Mapped Acceleration Parameters: $\mathbf{S_S}$ (for short periods) = 1.64g
$\mathbf{S_1}$ (for 1-second periods) = 0.60g

Site Coefficient: $\mathbf{F_a}$ (for short periods) = 1.0
$\mathbf{F_v}$ (for 1-second period) = 1.5

Adjusted Maximum Considered EQ Spectral Response Acceleration Parameters:

$\mathbf{S_{MS}} = \mathbf{F_a} * \mathbf{S_S} = 1.64g$

$\mathbf{S_{M1}} = \mathbf{F_v} * \mathbf{S_1} = 0.90g$

Design Spectral Response Acceleration Parameters:

$\mathbf{S_{DS}} = \mathbf{2/3} * \mathbf{S_{MS}} = 1.10g$

$\mathbf{S_{D1}} = \mathbf{2/3} * \mathbf{S_{M1}} = 0.60g$

Seismic Design Category: **D**

The ground-shaking hazard is common to all properties in California. Proper structural design as outlined above and in the Geotechnical Investigation prepared for the project bring the hazard to ***less than significant with mitigation.*** Source Documentation: [29]

a) iii. *SEISMIC-RELATED GROUND FAILURE, INCLUDING LIQUEFACTION*

Even under the influence of severe ground shaking, the mostly clayey soils that underlie this site are unlikely to liquefy. No potentially liquefiable sands were found at this site. No mitigation is required. Impacts are considered ***less than significant.*** Source Documentation: [29]

a) iv. *LANDSLIDES*

The site and vicinity are essentially flat. Landsliding is not a potential hazard to this site. No mitigation is required. Impacts are considered ***less than significant.*** Source Documentation: [29]

b) *EROSION*

The site soils are moderately erodable. Mitigate by controlling the discharge of concentrated water, both during and after construction. Impacts are considered ***less than significant with mitigation.*** Source Documentation: [29]

c) *UNSTABLE SOIL*

AMSO Consulting Engineers concluded in their report that the site is suitable for the proposed construction of the housing project provided that the recommendations presented in their report are followed during the design and construction phases. Provided that all recommendations made in the report are followed, impacts are considered ***less than significant.*** Source Documentation: [29]

d) *EXPANSIVE SOIL*

The clayey soils that underlie the site have low potential for expansion. To minimize the potential effect of expansion on the proposed structures, the surface layer of clay should be water conditioned and compacted as recommended in the "Site Preparation, Grading and Compaction" section of the Geotechnical Investigation. Impacts are considered ***less than significant with mitigation.*** Source Documentation: [29]

e) *SEPTIC TANKS*

The project does not involve septic systems or alternative sewer waste systems; therefore there is ***no impact*** to soils incapable of supporting the use of septic tanks. Source Documentation: [29]

RECOMMENDATIONS

LIQUEFACTION

For additional recommendations for *Foundations, Slab on Grade Construction, Site Preparation and Grading,* as well as *Site Drainage* and *Construction Observation and Further Services,* please see the attached Geotechnical Engineering Study in its entirety and found in Appendix D.

MITIGATIONS

The following are Mitigation Measures and Conditions of Approval that apply to this section of the checklist.

SOILS AND GEOTECHNICAL

G1. Follow all recommendations in the Geotechnical Investigation for Kottinger Residential Development, 240 & 251 Kottinger Drive, 4138 Vineyard Avenue, Pleasanton, California prepared by AMSO Consulting Engineers and dated March 8, 2013 and found in Appendix D.

VII. GREENHOUSE GAS EMISSIONS Would the project:	*Potentially Significant Impact*	*Less than significant with Mitigation*	*Less than significant*	*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	

SETTING

Similar to regulated air pollutants, Greenhouse Gas (GHG) emissions and global climate change also represent cumulative impacts. GHG emissions contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change. Climate change impacts may include an increase in extreme heat days, higher concentrations of air pollutants, sea level rise, impacts to water supply and water quality, public health impacts, impacts to ecosystems, impacts to agriculture, and other environmental impacts. No single project could generate enough GHG emissions to noticeably change the global average temperature. The combination of GHG emissions from past, present, and future projects contribute substantially to the phenomenon of global climate change and its associated environmental impacts.

IMPACTS

THRESHOLDS OF SIGNIFICANCE

The Thresholds of Significance for operational-related GHG emissions are: For land use development projects, the threshold is compliance with a qualified GHG Reduction Strategy; or annual emissions less than 1,100 metric tons per year (MT/yr) of CO2e; or 4.6 MT CO2e/SP/yr (residents + employees). Land use development projects include residential, commercial, industrial, and public land uses and facilities. For stationary-source projects, the threshold is 10,000 metric tons per year (MT/yr) of CO2e. Stationary-source projects include land uses that would accommodate processes and equipment that emit GHG emissions and would require an Air District permit to operate. If annual emissions of operational-related GHGs exceed these levels, the proposed project would result in a cumulatively considerable contribution of GHG emissions and a cumulatively significant impact to global climate change. Source documentation: [30]

Table 8 Greenhouse Gases – Analysis

Mitigated	CO2 (Total all sources) (metric tpy)	CH4 (metric tpy)	N2O (metric tpy)	CO2e (metric tpy)
Area Source:	2.32	0.00	0.00	2.37
Energy:	271.99	0.01	0.00	273.67
Mobile:	257.51	0.01	0.00	257.78
Water & Wastewater:	21.94	0.30	0.01	30.70
Solid Waste:	8.82	0.52	0.00	19.78
Total:	562.58	0.84	0.01	584.30
BAAQMD Threshold				**1,100 (MT CO2e per year)**
Significance				**No**

a) and b) CONCLUSION

The project would incrementally generate greenhouse gas emissions; however, these emissions would not have a significant impact on the environment. The project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. Impacts would be ***less than significant.*** Source documentation: [13]

VIII. HAZARDS AND HAZARDOUS MATERIALS Would the project:	*Potentially Significant Impact*	*Less than significant with Mitigation*	*Less than significant*	*No Impact*
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?		X		
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?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
d) Be located on a site which is included on a list of hazardous materials sites complied pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?		X		
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 result in a safety hazard for people residing or working in the project area?				X
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?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X

SETTING

AEI Consultants (AEI) was retained by MidPen Housing Corporation in January 2013 to conduct a Phase I Environmental Site Assessment (ESA), in general conformance with the scope and limitations of ASTM Standard Practice E1527-05 and the Environmental Protection Agency Standards and Practices for All Appropriate Inquiries (40 CFR Part 312) for the properties located at 240 & 251 Kottinger Drive, 4138 Vineyard Avenue, and 4153 Regalia Court in the City of Pleasanton, Alameda County, California.

The subject property, which consists of one City-owned senior housing development, one privately-owned senior housing development, a vacant lot and a city owned building, is located on the north and south sides of Kottinger Drive in a mixed commercial and residential area of Pleasanton, California. The property totals approximately 6.2

acres and is improved with 29 one-story buildings totaling approximately 54,300 square feet. All buildings are of wood frame, slab-on-grade construction. The subject property is currently occupied by a city owned building (Regalia House), Kottinger Place senior apartments (50 units), Pleasanton Gardens senior apartments (40 units) and a vacant lot. Onsite operations include senior apartments and a building that is rented out for events. In addition to the subject property buildings, the property is improved with tenant garden areas, asphalt-paved parking areas and associated landscaping.

IMPACTS

b) and c) HAZARDOUS MATERIALS USE

The proposed project entails the demolition of 90 units of housing and new construction of 172-189 units of affordable housing for seniors. Project operations are not anticipated to create a significant hazard to the public or environment through the routine transport, use or disposal of hazardous materials; or create a situation whereby an upset or accident would occur involving the release of hazardous materials; therefore, ***no impact.***

It is possible that equipment used at the site during construction activities could utilize substances considered by regulatory bodies as hazardous, such as diesel fuel and gasoline. However, all construction activities would adhere to recognized Best Management Practices, which provide guidelines for the safe transport, use and disposal of materials and equipment. Impacts are considered ***less than significant.***

The project site is approximately 0.30 miles north northwest of Valley View Elementary School. However, as discussed above, the project is not anticipated to emit or handle hazardous materials. Therefore, with respect to the potential of the project to impact the public or the environment through the routine transport, use or disposal of hazardous materials; or through reasonably foreseeable upset and accident conditions causing the release of hazardous materials; or through the emission or handling of hazardous materials within one-quarter mile of an existing or proposed school, there would be a ***less than significant*** impact. Source documentation: [(5) (31) (32)]

a) and d) PRESENCE AND DISPOSAL OF HAZARDOUS MATERIALS

PHASE I ENVIRONMENTAL SITE ASSESSMENT

Local and state agencies, such as environmental health departments, fire prevention bureaus, and building and planning departments were contacted by AEI Consultants in January 2013, to identify any current or previous reports of hazardous materials use, storage, and/or unauthorized releases that may have impacted the subject property. In addition, information pertaining to Activity and Use Limitations (AULs), defined as legal or physical restrictions, or limitations on the use of, or access to, a site or facility, is requested.

On January 2, 2013, AEI contacted the Alameda County Department of Environmental Health (ACDEH) for information on the subject property and nearby sites of concern. Files at this agency may contain information regarding hazardous materials storage, as well as information regarding unauthorized releases of petroleum hydrocarbons or other contaminants that may affect the soil or groundwater in the area. For the City of Pleasanton, the ACDEH only has records for leaking underground storage tanks (LUSTs). Copies of these files and other environmental files are kept at the Livermore-Pleasanton Fire Department. No information indicating current or prior use or storage of hazardous materials, or the existence of AULs was on file for the subject property with the ACDEH.

On January 7, 2013, AEI visited the Livermore-Pleasanton Fire Department (LPFD) for information on the subject property to identify any evidence of previous or current hazardous material usage. No information indicating current or prior use or storage of hazardous materials, or the existence of AULs was on file for the subject property with the LPFD.

On January 2, 2013, AEI visited the Pleasanton Building Department (PBD) for information on the subject property in order to identify historical tenants and property use. No information indicating current or prior use or storage of hazardous materials, or the existence of AULs was on file for the subject property with the PBD.

On January 2, 2013, AEI visited the Pleasanton Planning Department (PPD) for information on the subject property in order to identify AULs associated with the subject property. No information indicating the existence of AULs was on file for the subject property with the PPD.

On January 2, 2013, AEI contacted the Alameda County assessor's office for information on the subject property in order to determine the earliest recorded date of development and use. According to the Alameda County assessor's office, the earliest recorded date of development on subject property was 1972 for 240 Kottinger Drive and 1969 for 251 Kottinger Drive, and the subject property was utilized for senior housing.

Department of Oil, Gas, and Geothermal Resources (DOGGR) maps concerning the subject property and nearby properties were reviewed. DOGGR maps contain information regarding oil and gas development. According to the DOGGR map, there are no oil or gas wells within 500 feet of the subject property.

On January 2, 2013, AEI visited the City of Pleasanton Housing Authority (PHA) for and received information on square footage and age of the properties. On January 2, 2013, AEI visited the Museum on Main (Pleasanton Historical Society) for historical information on the subject property. AEI was informed that the 240 Kottinger Drive property and the adjoining park was previously occupied by housing constructed during World War II (1943) and was known as Kottinger Village. The curators stated the residences were demolished when the current improvements were constructed in 1972. A wood plaque for Kottinger Village is on display at the Museum on Main.

REGULATORY DATABASE RECORDS REVIEW

AEI contracted Environmental Data Resources (EDR) to conduct a search of federal, state, tribal, and local databases containing known and suspected sites of environmental contamination. The number of listed sites identified within the approximate minimum search distance (AMSD) from the Federal and State environmental records database listings specified in ASTM Standard E 1527-05 are summarized in the following table. The subject property was identified in the databases reviewed as a HAZNET site.

Table 9 Regulatory Database Records Summary

Database	Search Distance (Miles)	Subject Property Listed	Total Number of Listings	Potential Environmental Concern to the Subject Property (Yes/No)
NPL	1	No	0	No
DELISTED NPL	0.5	No	0	No
CERCLIS	0.5	No	0	No

CERCLIS NFRAP	0.5	No	0	No
RCRA CORRACTS	1	No	0	No
RCRA LG-GEN, SM-GEN, CESQGs, VGN, NLR	TP/ADJ	No	0	No
US ENG CONTROLS	TP	No	0	No
US INST CONTROLS	TP	No	0	No
ERNS	TP	No	0	No
STATE/TRIBAL HWS	1	No	0	No
STATE/TRIBAL SWLF	0.5	No	0	No
STATE/TRIBAL REGISTERED STORAGE TANKS	TP/ADJ	No	4	No, all four sites are located downgradient.
STATE/TRIBAL LUST	0.5	No	9	No, all nine sites are located downgradient.
STATE/TRIBAL ENG-INST CONTROLS	TP	No	0	No
STATE/TRIBAL VCP	0.5	No	0	No
STATE/TRIBAL BROWNFIELD	0.5	No	0	No
ORPHAN	N/A	No	5	None of the identified orphan sites are located in the immediate vicinity (500-feet) of the subject property, and therefore, these sites are not expected to represent a significant environmental concern.
NON- ASTM DATABASES	TP/ADJ	**YES**	1	No, discussed below.
Site Name: City of Pleasanton Database: HAZNET Address: 4138 Vineyard Avenue Distance: Subject Property Direction: N/A				
Comments: This property is now a vacant lot that is part of the subject property. It was occupied by a residence built in 1948. It was purchased by the City of Pleasanton in 2011 and demolished in late 2011 or early 2012. This listing is for the removal of 0.8 tons of asbestos containing waste, likely from the demolition of the building. This listing is not expected to represent a significant concern.				

Small amounts of household cleaning supplies, paints and maintenance chemicals (gasoline for lawn equipment) are present on the 240 and 251 Kottinger Drive properties. All materials are stored in compliance with local and state regulations. No spills, staining or releases were observed on the subject properties.

ASBESTOS-CONTAINING BUILDING MATERIALS

OSHA

For buildings constructed prior to 1981, the Code of Federal Regulations (29 CFR 1926.1101 and 29 CFR 1910.1001) define presumed asbestos-containing material (PACM) as 1. Thermal System Insulation (TSI), e.g., boiler insulation, pipe lagging, fireproofing; and 2. Surfacing Materials, e.g., acoustical ceilings. Building owners/employers are responsible for locating the presence and quantity of PACM. Building owners/employers can rebut installed material as PACM by either having an inspection in accordance with Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763, Subpart E) or hiring an accredited inspector to take bulk samples of the suspect material.

Typical materials not covered by the presumptive rule include but are not limited to: floor tiles and adhesives, wallboard systems, siding and roofing. Building materials such as wallboard systems may contain asbestos but unless a building owner/employer has specific knowledge or should have known through the exercise of due diligence that these other materials contain asbestos, the standard does not compel the building owner to sample these materials.

NESHAP

The applicability of the EPA's National Emission Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Chapter 61, Subpart M) apply to the owner or operator of a facility where an inspection for the presence of asbestos-containing materials (ACM), including Category I (asbestos containing packings, gaskets, resilient floor coverings and asphalt roofing products), and Category II (all remaining types of non-friable asbestos containing material not included in Category I that when dry, cannot be crumbled, pulverized or reduced to powder by hand pressure), non-friable ACM must occur prior to the commencement of demolition or renovation activities. NESHAP defines ACM as any material or product that contains greater than 1% asbestos. It should be noted that the NESHAP regulation applies to all facilities regardless of construction date, including: 1. Any institutional, commercial, public, industrial, or residential structure, installation, or building; 2. Any ship; and 3. Any active or inactive waste disposal site. This requirement is typically enforced by the EPA or by local air pollution control/air quality management districts.

Due to the age of the subject property buildings, there is a potential that ACMs are present. The condition and friability of the identified suspect ACMs is noted on the following table:

Table 10 Suspect Asbestos Containing Materials (ACMs)

Material	Location	Friable	Condition
Drywall Systems	Throughout Building Interiors	No	Good
1' x 1' ceiling tiles	Regalia House (4153 Regalia Court)	Yes	Good
Vinyl sheet flooring	Kitchen area and bathrooms in all tenant units and clubhouses. Interior of Regalia House	No	Good
Roofing Systems	Roof	Not Inspected	Not Inspected

All observed suspect ACMs were in good condition and are not expected to pose a health and safety concern to the occupants of the subject property at this time. In the event that building renovation or demolition activities are planned, an asbestos survey adhering to AHERA sampling protocol should be performed prior to demolition or renovation activities that may disturb suspect ACMs.

LEAD-BASED PAINT

Lead-based paint (LBP) is defined as any paint, varnish, stain, or other applied coating that has ≥1 mg/cm2 (5,000 µg/g or 5,000 ppm) or more of lead by federal guidelines; state and local definitions may differ from the federal definitions in amounts ranging from 0.5 mg/cm2 to 2.0 mg/cm2. Section 1017 of the Housing and Urban Development (HUD) Guidelines, Residential Lead-Based Paint Hazard Reduction Act of 1992, otherwise known as "Title X", defines a LBP hazard is "any condition that causes exposure to lead that would result in adverse human health effects" resulting from lead-contaminated dust, bare, lead-contaminated soil, and/or lead-contaminated paint that is deteriorated or present on accessible, friction, or impact surfaces. Therefore, under Title X, intact lead-based paint on most walls and ceilings would not be considered a "hazard", although the paint should be maintained and its condition monitored to ensure that it does not deteriorate and become a hazard. Additionally, Section 1018 of this law directed HUD and EPA to require the disclosure of known information on lead-based paint and lead-based paint hazards before the sale or lease of most housing built before 1978. Most private housing, public housing, federally owned or subsidized housing are affected by this rule.

Lead-containing paint (LCP) is defined as any paint with any detectable amount of lead present in it. It is important to note that LCP may create a lead hazard when being removed. The condition of these materials must be monitored when they are being disturbed. In the event LCP is subject to abrading, sanding, torching and/or cutting during demolition or renovation activities, there may be regulatory issues that must be addressed.

Due to the age of the subject property buildings, there is a potential that LBP is present. All observed painted surfaces were in good condition and are not expected to pose a health and safety concern to the occupants of the subject property at this time. Local regulations may apply to lead-based paint in association with building demolition/renovations and worker/occupant protection. Actual material samples would need to be collected or an XRF survey performed in order to determine if LBP is present. It should be noted that construction activities that disturb materials or paints containing any amount of lead may be subject to certain requirements of the OSHA lead standard contained in 29 CFR 1910.1025 and 1926.62.

CONCLUSIONS AND RECOMMENDATIONS

Prior to the demolition of the existing structures on site, the amount and extent of any Asbestos-Containing Building Materials (ACBMs) and/or lead-based paint (LBP) should be ascertained and all hazardous materials found to be present should be properly handled, removed, recycled, and/or disposed of by properly certified contractors using approved methods in accordance with all applicable federal, state, and local regulations. Impacts are therefore ***less than significant with mitigation.*** Source documentation: [32]

e) and f) AIRPORT HAZARDS

The project site is not near a public airport or private airstrip nor is it located within an airport plan area. There would be no impact in this regard. There are no major airports within 10 miles of the project site. The nearest minor airports within 5 miles of the site are Camp Parks, 3.49 miles to the north and Livermore Municipal Airport

3.43 miles northeast of the site. No impact zones from any airport or airstrip extend to the site; therefore there is ***no impact*** in this regard. Source documentation: [33] [34]

g) EMERGENCY RESPONSE

The project would not impair implementation of or physically interfere with an adopted emergency response plan. Project review by the Fire Department will ensure that there will be ***no impact*** to any adopted emergency response plan. Source documentation: [3] [6]

h) WILDLAND FIRES

There are no wildlands on site or adjacent that could pose a risk of wildland fires. The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, there would be ***no impact*** in this regard. Source documentation: [6]

MITIGATIONS

DEMOLITION

HZ1. Prior to the demolition of the existing structures on site, the amount and extent of any Asbestos-Containing Building Materials (ACBMs) and/or lead-based paint (LBP) should be ascertained and all hazardous materials found to be present should be properly handled, removed, recycled, and/or disposed of by properly certified contractors using approved methods in accordance with all applicable federal, state, and local regulations.

IX. HYDROLOGY AND WATER QUALITY Would the project:	*Potentially Significant Impact*	*Less than significant with Mitigation*	*Less than significant*	*No Impact*
a) Violate any water quality standards or waste discharge requirements?		x		
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)?			x	
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?		x		
d) Substantially alter the existing drainage pattern of the site or area, in 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?		x		
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?		x		
f) Otherwise substantially degrade water quality?		x		
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?				x
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				x
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?				x
j) Inundation by seiche, tsunami, or mudflow?				x

SETTING

WATER SUPPLY

The City of Pleasanton, Water Division currently provides water service to the project site(s), except for the vacant parcel at 4138 Vineyard Avenue. The Water Division provides a high quality and dependable potable water supply to the residents and businesses of Pleasanton and strives to maintain a leak-free system that provides continuous service, emergency fire protection and meets the fluctuating demands of the system. The Water Division makes it a high priority to meet all State Health Department standards and to protect Pleasanton's natural resources and the environment.

Pleasanton's water system is controlled with the use of a sophisticated computerized system called SCADA (Supervisory Control and Data Acquisition). This system connects the pump stations and reservoirs together using a radio telemetry system to communicate to a central control computer at the Water Division. This system allows employment of many backup and safety features that would not be possible if it were done manually. In addition, it allows programming for more efficient operations and ratepayers' cost savings.

The Water Division operates 16 pump stations throughout the City of which three are groundwater well pump stations used to augment the treated water that is distributed. In addition, six treated water stations are operated where the final fluoridation process takes place.

The Water Division operates and maintains 22 storage reservoirs spread strategically throughout the City. These reservoirs vary in size from 20,000 gallons to over eight million gallons each. These reservoirs are critical to provide the proper pressure in the system as well as supply during high demands and for emergency firewater protection.

IMPACTS

b) WATER SUPPLY

The demand for water is expected to approximately double over current water consumption as the number of units will roughly double. The project represents an increase for water demand.

At present, a 16 inch water main runs from Kottinger Drive down the center of the site to Vineyard Avenue. In consultation with the City of Pleasanton's Operations Services Department, it has been determined that this water main will be abandoned during redevelopment in order to remain consistent with current water main standards. As a result, the project would be required to upgrade the existing water main running under First Street and make the connection to Vineyard Avenue at the same time. MidPen has received two preliminary estimates for this work, and has conservatively budgeted $275,000 to complete it.

The project's impact on the supply of water would be ***less than significant***. Source documentation: [35]

g) through i) FLOODPLAINS

Review of the Flood Insurance Rate Map Panel Number 06001C0336G, published by the Federal Emergency Management Agency (FEMA) dated August 3, 2009, indicates the proposed project is located in Zone X meaning that it is:

- an area outside the 1-percent annual chance floodplain,

- an area of 1% annual chance sheet flow flooding where average depths are less than 1 foot,
- an area of 1% annual chance stream flooding where the contributing drainage area is less than 1 square mile, or
- in areas protected from the 1% annual chance flood by levees.

No Base Flood Elevations or depths are shown within this zone, and insurance purchase is not required in these zones.

The project does not involve property acquisition, land management, construction or improvement within a 100 year floodplain (Zones A or V) or 500 year floodplain (Zone B) identified on a Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM). Flood Insurance requirements are not invoked. There is ***no impact*** in this regard. Source documentation: [16]

j) SEICHE, TSUNAMI AND MUDFLOW

The project site topology is flat and approximately 358 feet above mean sea level. The project site is located approximately 15 miles from the California coastline. No impact is expected as a result of the project. Source documentation: [5] [29]

a) and c) through f) STORM WATER AND WATER QUALITY

The California State Water Resources Control Board (SWRCB) is responsible for establishing water quality standards in California, and the San Francisco Regional Water Quality Control Board (RWQCB) is responsible for regulating discharges of wastes and stormwater runoff to San Francisco Bay. The RWQCB completed the most recent review and update of the Water Quality Control Plan (Basin Plan) for the San Francisco Bay region in 2007. Consistent with state law, the Basin Plan includes a statement of beneficial water uses to be protected, water quality objectives (or standards), strategies and schedules for achieving those objectives, and waste discharge requirements.

The United States Environmental Protection Agency (EPA) is also responsible for setting standards and regulating activities that affect water quality, under the federal Clean Water Act (Federal Water Pollution Control Act Amendments of 1972, as amended, and commonly known as the Clean Water Act). The Clean Water Act established the National Pollution Discharge Elimination System (NPDES), which is used by the state, regional and local agencies (such as Alameda County) to regulate discharges from both point sources (such as industrial sources) and non-point sources (such as urban runoff). Section 303(d) of the federal Clean Water Act requires states to identify water bodies that are not attaining water quality standards, and to establish total maximum daily loads (TMDLs) for pollutants causing the impairment. As such, TMDLs establish a special kind of water quality standard applicable where the EPA has recognized a given water body as failing to meet water quality standards or objectives. The lower San Francisco Bay is listed for a wide range of contaminants, such as DDT, dioxin compounds, mercury, and polychlorinated biphenyls (PCBs).

The RWQCB primarily regulates non-point discharges by issuing permits for stormwater runoff to municipalities and counties, contingent on the implementation of controls and practices (Best Management Practices, or BMPs) to protect water quality. The RWQCB's Basin Plan requires that new development of one acre or more provide permanent, post-construction measures to protect water quality to reduce pollution and the rate of runoff which typically results from new impervious surfaces such as roads and roof tops.

Construction of the project would require a substantial degree of excavation, stockpiling and grading activities. During construction, discharges of stockpiled fill materials or erosion of exposed soil into local storm drains and

culverts during rainstorms could have adverse water quality impacts on neighboring properties, local roadways, storm drainage facilities, and San Francisco Bay. The RWQCB requires the developer of any proposal to disturb one or more acres of land to apply for a "General Permit for Stormwater Discharges Associated with Construction". The General Permit requires that the applicant submit a Notice of Intent (NOI) and a Storm Water Pollution Prevention Plan (SWPPP) to the RWQCB and Alameda County Public Works Agency's Grading Department and Clean Water Program, the latter of which is responsible for implementing the NPDES requirements. Without proper measures in the SWPPP to control stormwater flows during construction, the project would have a *potentially significant* impact due to violation of standards, conflict with objectives, failure to meet discharge requirements or degradation of the beneficial uses of surface waters in the Bay Area.

In addition, the proposed project site is located in an area that has been identified by the County of Alameda as one that requires Hydrograph Modification Management. Hydrograph Modification Management, also called Hydromodification Management (HM) is an NPDES requirement to control increases in peak runoff flow and volume when these increases would likely have negative impacts on creeks and other waterways. Negative impacts include erosion of creek banks and siltation. Flow duration control is a structural approach to provide HM. For certain projects flow duration facilities are required to detain excess stormwater and release it at rates which match pre-development conditions. Applicability of HM controls depends largely on the location of the project. In certain applicable areas, projects must provide stormwater HM control for any increase in flow or volume of stormwater runoff. HM controls apply to projects whose drainage could adversely affect natural creek channels, such as this one.

Applicable projects creating or replacing one acre or more of impervious surface will be required to comply with the Alameda Countywide Hydromodification Management Plan.

HM requirements are separate from post-construction treatment. Whereas stormwater treatment is intended to improve the quality of stormwater by removing pollutants, HM controls the volume and/or duration of runoff to minimize the erosion of creeks. However, where both treatment controls and HM controls are required, one facility may be designed to meet the needs for both requirements. The project will be required to implement HM. With HM, the project therefore must include in the design of its storm drainage system detention measures, using the Bay Area Hydrologic Model (BAHM) program that must be sized to control the flow and duration of the stormwater runoff.

Project impacts in the above areas are considered ***less than significant with mitigation.*** Source documentation: [36] [37] [38]

MITIGATIONS

The following are conditions of approval for the project that apply to this section of the checklist.

HYDROLOGY

H1. The project will be required to implement Hydrograph Modification Management (HM). With HM, the project therefore must include in the design of its storm drainage system detention measures, using the Bay Area Hydrologic Model (BAHM) program that must be sized to control the flow and duration of the storm water runoff.

H2. During project review, the applicant must prepare a maintenance plan and enter into an operation and maintenance agreement with the municipality to identify and record the party responsible for long-term maintenance of HM controls and stormwater treatment measures.

WATER QUALITY

WQ1. It is the responsibility of the applicant to comply with Federal, State, and local water quality standards and regulations. In order for the County and the applicant to comply with the Alameda Countywide Clean Water Program's (ACCWP) National Pollutant Discharge Elimination System (NPDES) Municipal Storm Water Permit issued by the San Francisco Bay Regional Water Quality Control Board, water quality protection must be implemented both during construction and after construction. Permanent measures to protect water quality will reduce pollution that is commonly produced from the creation of new impervious surfaces such as roads and rooftops. The applicant shall provide measures to prevent discharge of contaminated materials into public drainage facilities both during construction and post-construction periods. The primary references for providing stormwater treatment are "ACCWP C.3 Stormwater Handbook" and the "California Best Management Practices (BMP) Handbook for New Development and Redevelopment, 2003".

WQ2. Projects with disturbances greater than one acre must file a Notice of Intent (NOI) with the State Water Resources Control Board (SWRCB) per the regulations of the General Construction Activities NPDES permit. The SWRCB will require the preparation of a Storm Water Pollution Prevention Plan (SWPPP). The NOI and the SWPPP must be submitted prior to issuance of a grading permit and prior to any land disturbance of on the site. The SWPPP will include specifications for best management practices (BMPs) that will be implemented during project construction to minimize the potential for accidental releases or contamination, and to minimize runoff from the construction areas, including storage and maintenance areas and building materials laydown areas. Measures should include dust control, such as water spraying or application of dust suppressants, and gravel covering of high traffic areas, temporary storage of excavated soil material, and controls on the release of groundwater generated by dewatering. The SWPPP will also include a description of a plan for communicating appropriate work practices to field workers and a plan for monitoring, inspecting and reporting any release of hazardous materials.

X. LAND USE AND PLANNING Would the project:	*Potentially Significant Impact*	*Less than significant with Mitigation*	*Less than significant*	*No Impact*
a) Physically divide an established community?				x
b) Fundamentally 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, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect and actually result in a physical change in the environment?		x		
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				x

SETTING

The project involves demolition of the existing senior housing units on two of the subject properties (which contains 90 units total) and demolition of City-owned Regalia House, a clubhouse located at 4153 Regalia Court.

GENERAL PLAN

The following are the General Plan Land Use Designations and current zoning for each subject parcel:

Address	General Plan Land Use Designation	Current Zoning
240 Kottinger Drive:	High Density Residential; Greater than 8 dwelling units per acre	RM-25 Multiple Family Residential, 2,500 square foot lot/per unit
251 Kottinger Drive:	High Density Residential; Greater than 8 dwelling units per acre	RM-25 Multiple Family Residential, 2,500 square foot lot/per unit
4138 Vineyard Drive:	High Density Residential; Greater than 8 dwelling units per acre	RM-4 Multiple Family Residential, 4,000 square foot lot/per unit
4153 Regalia Court:	Open Space; Parks and Recreation	R-1-65 Single Family Residential, 6,500 square foot minimum lot

EXISTING LAND USES

240 Kottinger Drive: 3.45 acre site that is occupied by Kottinger Place, an affordable senior housing development that consists of 50 units

251 Kottinger Drive:	1.94 acre site that is occupied by Pleasanton Gardens, an affordable senior housing development that consists of 40 units
4138 Vineyard Drive:	0.50 acre site that is owned by the City of Pleasanton and is currently vacant
4153 Regalia Court:	Currently, this site which houses "Regalia House" is part of the parcel that includes Kottinger Village Community Park. This parcel will be divided upon project commencement activities. The portion of the parcel where Regalia House is located, is north of the access street, Regalia Court, and is therefore segregated from the rest of Kottinger Village Community Park by the street.

Source documentation: [2]

IMPACTS

a) COMMUNITY DIVISION

The project is infill redevelopment that would provide additional affordable senior housing units. The design conforms to the design guidelines and development standards in the *Pleasanton General Plan, Housing Element.* The project would not physically divide the community; therefore there is ***no impact*** in this regard. Source documentation: [2]

b) CONFORMANCE WITH ANY APPLICABLE LAND USE PLAN, POLICY, OR REGULATION

A General Plan Amendment (GPA) and Planned Unit Development (PUD) zoning designation approval is required on all subject parcels to allow the project to proceed. Approval of the GPA and PUD by the City of Pleasanton will ensure the project is consistent with comprehensive plans and zoning. Therefore impacts are considered ***less than significant with mitigation.*** Source documentation: [39]

c) HABITAT CONSERVATION PLANS

The proposed project is redevelopment of improved parcels. The subject properties are not included in any habitat conservation plan or other natural community conservation plan; therefore there is ***no impact*** in this regard. Source Documentation: [40]

MITIGATIONS

These conditions are to allow a portion of the Kottinger Village Community Park parcel that includes Regalia House to be included in the project and to allow the redevelopment of the subject parcels to a higher density.

E1. Divide parcel containing 4153 Regalia House also known as 4136 Vineyard Avenue with Assessor's Parcel Number 094-0095-034.

E2. Obtain a General Plan Amendment (GPA) and Planned Unit Development (PUD) designation approval for all subject parcels.

XI. MINERAL RESOURCES Would the project:	*Potentially Significant Impact*	*Less than significant with Mitigation*	*Less than significant*	*No Impact*
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?				X
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?				X

SETTING

The project site is in an urban area.

IMPACTS

a) and b)

The proposed project would not result in the loss of availability of a known or locally important mineral resource. The site is located in an urban area; there would be ***no impact*** in this regard. Source documentation: [6]

XII. NOISE Would the project:	*Potentially Significant Impact*	*Less than significant with Mitigation*	*Less than significant*	*No Impact*
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 (e.g. OSHA)?		X		
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?				X
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
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?				X
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?				X

SETTING

EXISTING NOISE ENVIRONMENT

There are several noise measurement scales that are used to describe noise in a particular location. A decibel (dB) is a unit of measurement that indicates the relative intensity of a sound. The zero on the decibel scale is set at the lowest sound level that the healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis; an increase of 10 decibels represents a ten-fold increase in acoustic energy, while 20 decibels is 100 times more intense, 30 decibels is 1,000 times more intense, etc. There is a relationship between the subjective noisiness or loudness of a sound and its measured intensity. Each 10-decibel increase in sound level is perceived as approximately a doubling of loudness over a fairly wide range of intensities.

There are several methods of characterizing sound. The most common in California is the A-weighted sound level or dBA. This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental

sounds are described in terms of an average level, equivalent in energy to the total energy of the actual noise levels experience over a fixed period of time, most commonly an hour. This energy-equivalent sound/noise descriptor is called Leq.

Since people's sensitivity to noise increases during the evening and at night, the Community Noise Equivalent Level (CNEL) was developed. The CNEL gives greater weight to noise levels during the evening and night than during the day. The Day/Night Average Sound Level, L_{dn}, is essentially the same as CNEL, with the exception that the evening time period is not given greater weight than the daytime period.

REGULATORY SETTING

The project site is subject to noise criteria from the City of Pleasanton and the California Building Code. The specific criteria for each of these are discussed below.

CITY OF PLEASANTON

Exterior and interior noise guidelines established by the City of Pleasanton for land-use compatibility is as follows:

- For new multi-family residential development, maintain a maximum standard of 65 dBA Ldn in community outdoor recreation areas (or 60 dBA L_{dn} when the outdoor noise is due to aircraft). Noise standards are not applied to balconies or front yards.
- All new multi-family residential land uses shall be designed to maintain a standard of 45 dB L_{dn} maximum in building interiors.

Source documentation: [41]

CALIFORNIA BUILDING CODE

The California Building Code (Title 24, Chapter 12) requires that the indoor noise level in new multi-family housing not exceed DNL 45 dBA where the exterior noise level is greater than DNL 60 dBA. The CBC also states that if windows must be closed to meet the interior standard, the design must include ventilation or air-conditioning system to provide a habitable interior environment.

IMPACTS

a) NOISE ENVIRONMENT

The project site is located in Pleasanton, California. The major noise source is vehicle traffic on Vineyard Avenue, a nearby roadway. The projected noise environment in 2025, as predicted in the City of Pleasanton Noise Element of the General Plan, the project site lies within the 60 dBA L_{dn} noise contour.

In March 2013, an environmental noise assessment was conducted at the project site by Illingworth & Rodkin, Inc. Noise monitoring was completed at the site between March 13 and 15, 2013 in order to quantify existing ambient noise levels. The noise monitoring survey included one long-term measurement (LT-1) and one short-term measurement (ST-1).

Long-term noise measurement site LT-1 was located approximately 35 feet from the center of Kottinger Drive and about 12 feet above the ground. Hourly average noise levels typically ranged from 52 to 60 dBA L_{eq} during the day and from 39 to 55 dBA L_{eq} at night. The calculated day-night average noise level at this location was 60 dBA L_{dn}.

Short-term noise measurement ST-1 was made approximately 40 feet from the center of Vineyard Avenue. The average noise level between 12:00 p.m. and 1:00 p.m. on Wednesday March 13, 2013 was 63 dBA L_{eq}. A second noise measurement was made at this same location between 11:00 a.m. and 12:00 p.m. on Friday, March 15, 2013. The average noise level during this time period was 61 dBA L_{eq}. The Ldn at site ST-1 is estimated to be 65 dBA.

Future Exterior Noise Environment

The future exterior noise environment at the project site was calculated by adjusting the measured noise data to account future traffic conditions along Vineyard Avenue and Kottinger Drive. The future noise environment at proposed noise sensitive receptors adjacent to Vineyard Avenue and Kottinger Drive would be about 1 dBA higher than existing conditions assuming a 1% to 2% increase in traffic volumes per year over the next 15 to 20 years. These projections were also compared to the data presented in the 2005 Pleasanton Plan 2025 and confirmed. The 2005 Pleasanton Plan 2025 indicates that the future 65 dBA L_{dn} noise contour along Vineyard Avenue (east of First Street) would be located 60 feet from the roadway centerline by 2025.

Based on these data, future exterior noise levels would reach 66 dBA L_{dn} at a distance of 45 feet from the center of Vineyard Avenue, equivalent to the northernmost façade of the multi-family building proposed nearest the roadway. Future noise levels at the buildings proposed nearest to Kottinger Drive are calculated to reach 60 dBA L_{dn} at a distance of 50 feet from the centerline.

Future exterior noise levels would exceed HUD's 65 dBA Ldn threshold within approximately 60 feet of the Vineyard Avenue centerline. HUD's "normally acceptable" threshold for noise levels at outdoor spaces would be met at distances greater than 60 feet from the center of Vineyard Avenue and at outdoor spaces proposed adjacent to Kottinger Drive.

The conceptual site plan indicates there are a number of green spaces and community amenities located at distances greater than 60 feet from the center of Vineyard Avenue. If it is determined that quiet outdoor space is required within 60 feet of the center of Vineyard Avenue, minimum 5-foot noise barriers should be constructed to reduce noise levels to less than 65 dBA L_{dn}.

Future Interior Noise Environment

Residential units proposed within 60 feet of the Vineyard Avenue centerline would be exposed to future exterior noise levels greater than 65 dBA L_{dn}. The predicted exterior noise level at the nearest facades, approximately 45 feet from the center of Vineyard Avenue, would exceed HUD'S "normally acceptable" threshold by 1 dBA L_{dn}, and would require an additional 5 decibels of attenuation to achieve acceptable levels in interior spaces. Approximately 25 decibels of attenuation would be required within the interiors of these units.

To determine the expected interior noise levels resulting from exterior noise sources, calculations were made to estimate the transmission loss provided by generic building elements. The relative areas of these elements were input into an acoustical model to calculate interior noise levels. The exterior wall construction of the proposed units was assumed as a standard 2x4 or 2x6 wood stud wall with insulation, a single layer of gypsum board at-

tached to the inside of the studs, and an exterior finish consisting of wood or cement board siding. This exterior wall construction has a rating of STC 39. Various windows and doors were then tested to determine the sound transmission class ratings for these building elements necessary to achieve the improved sound insulation rating.

The results of the calculations showed that windows/doors within 60 feet of the center of Vineyard Avenue and having direct line of sight to the roadway should be 24 STC or greater. These windows, in combination with the proposed wall construction, would achieve an outdoor-to-indoor composite noise reduction of 29 decibels with the windows closed and would maintain interior noise levels below 45 dBA L_{dn} with an adequate margin of safety. Additionally, all units within 100 feet of the centerline of Vineyard Avenue should be mechanically ventilated so that windows can be kept closed at the occupant's discretion to control noise. No additional mitigation would be required.

Impacts are considered ***less than significant with mitigation.*** Source documentation: [(42) (43)]

b) *Groundborne Vibration*

The site is not subjected to groundborne vibration from any source. There is ***no impact*** in this regard. Source documentation: [(5) (43)]

CONTRIBUTION TO COMMUNITY NOISE LEVELS

c) *Traffic*

Trips generated for the proposed project were analyzed in a traffic study performed by Whitlock & Weinberger Transportation, Inc. in June 2013. The study estimated that the proposed development will generate 295 net new daily trips (over current conditions), 20 net during peak AM hour and 24 PM peak hour trips. The study concluded that traffic impacts of the project are considered ***less than significant***. As such, the vehicle trips generated will not constitute a significant impact to community noise levels. Source documentation: [(44)]

d) *Temporary Construction Noise*

Construction activities are anticipated to include demolition, grading, paving, installation of underground utilities, and building construction. Noise generated by construction activities associated with the project would be the greatest during demolition, site grading and excavation phases. Construction-related noise levels during building framing, finishing, and landscaping phases are normally lower as construction moves indoors or requires less pieces of heavy-construction equipment.

Noise impacts resulting from construction depend on the noise generated by various pieces of construction equipment, the timing and duration of noise generating activities, and the distance between construction noise sources and noise sensitive areas. The nearest noise sensitive receivers (residences) adjoin the northernmost property line of the site. Residences are also located adjacent to the property to the south. Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day (e.g., early morning, evening, or nighttime hours), the construction occurs in areas immediately adjoining noise sensitive land uses, or when construction lasts over extended periods of time.

Construction activities generate considerable amounts of noise, especially during site grading activities and excavation for underground utilities. The highest maximum noise levels generated by project construction would typically range from about 90 to 95 dBA at a distance of 50 feet from the noise source. Typical hourly average construction

generated noise levels are about 81 dBA to 88 dBA measured at a distance of 50 feet from the center of the site during busy construction periods (e.g., earth moving equipment, impact tools, etc.). Hourly average noise levels generated by the construction of residential units would range from about 65 dBA to 88 dBA measured at a distance of 50 feet depending on the amount of activity at the site. Construction generated noise levels drop off at a rate of about 6 dBA per doubling of distance between the source and receptor. Shielding by buildings or terrain often result in lower construction noise levels at distant receptors.

The available controls are included in the project to reduce construction noise levels as low as practical. In Alameda County, the inclusion of these controls is assumed to reduce the impact from project construction to less-than-significant levels. All Alameda County Standard Conditions of Approval regarding noise control measures must be implemented at the project site at all times.

The operation of the project would not generate noise levels that would be considered substantial in terms of existing or future noise levels in the area. Future noise levels in the project vicinity will continue to result from local transportation related noise sources. Occasionally audible noises from the proposed residential land uses will not measurably contribute to daily average noise levels at nearby noise-sensitive receivers.

For reference, the acoustical energy resulting from all noise-generating activities associated with the project would have to equal the existing noise levels generated by all sources in the site vicinity (i.e., a doubling of environmental noise) for there to be a 3 dBA increase in the L_{dn}. A tripling of noise would have to occur for there to be a 5 dBA increase in the L_{dn}. A project that only incrementally increases ambient noise levels would not result in a doubling or tripling of acoustical energy, and would not substantially increase noise levels in the area.

CONCLUSION

Community noise levels will not be significantly affected by the development. The only contribution of the project to long-term noise levels would be from the normal automobile traffic generated from the project. Based on the traffic analysis prepared, the project would generate at most 295 daily vehicle trips which would not be sufficient to increase traffic-related noise levels on surrounding streets. Source documentation: [44]

The proposed project would also generate temporary building equipment noise and construction noise. However, these will be subject to limitations established in Alameda County conditions of approval for construction noise. With implementation of the mitigation measures listed at the end of this section, impacts are considered ***less than significant.***

e) and f) *AIRPORTS*

There are no airports that contribute to noise at the site. The nearest minor airports within 5 miles of the site are Camp Parks, 3.49 miles to the north and Livermore Municipal Airport 3.43 miles northeast of the site. There is ***no impact*** from airports to noise at the site. Source documentation: [5]

MITIGATIONS

The following are conditions of approval for the project that apply to this section of the checklist.

N1. Windows/doors within 60 feet of the center of Vineyard Avenue and having direct line of sight to the roadway should be 24 STC or greater to achieve an interior noise level of below 45 dBA L_{dn}.

N2. All units within 100 feet of the centerline of Vineyard Avenue should be mechanically ventilated so that windows can be kept closed at the occupant's discretion to control noise.

XIII. POPULATION AND HOUSING Would the project:	*Potentially Significant Impact*	*Less than significant with Mitigation*	*Less than significant*	*No Impact*
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 or other infrastructure)?			X	
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?		X		
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?		X		

SETTING

The project is redevelopment at a denser residential use by seniors. Existing units (90) to be demolished will be offered to the existing residents to be displaced.

IMPACTS

a) POPULATION GROWTH

As an affordable senior housing project, the project is not anticipated to cause a substantial growth in population in the area. The existing senior housing projects' residents will be offered a unit in the new development. There will be an approximate doubling of the number of units available (but half or 90 units can reasonably be expected to be occupied by the prior tenants).

Based on guidelines provided by HUD, the maximum number of residents appropriate to multi-family unit dwellings is two persons per bedroom, plus one per unit. Thus, at most there would be three persons in a one-bedroom apartment, five persons in a two-bedroom unit and seven people in a three-bedroom unit. The proposed project would provide one- and two-bedroom units. Using the developer's project description, we see a range of units planned at this time. There will be 157-170 one-bedroom units and 15-19 two-bedroom units. Carrying the math forward, we see that: 157 x 3 = 471 persons for the one-bedroom units; and 15 x 5 = 75 persons for the two-bedroom units. Add this all together for a total of 471 + 75 = 546 residents. So, the proposed project would provide housing for at 546 people at the low end of units planned. Following the same math for the higher unit count, we have 170 x 3 = 510 for the one-bedroom units and 19 x 5 = 95 for the two-bedroom units for a total of 605 persons. However, it is not expected that three seniors will occupy a one-bedroom unit. Nevertheless, for the purposes of this analysis, a population of 546 to 605 senior citizens is assumed. The population of Pleasanton was estimated at 70,285 in 2010, with 7,661 over the age of 65. The addition of at most 605 people would represent 0.8% of the population at large and a 7.8% increase in the 65 and over population, if they were to all come from outside of the city of Pleasanton and none of the current residents opted for a new unit. ***Less than significant*** impact is expected to result from the proposed project, as it would not create a significant change to the demographics of the area. Source documentation: [45]

b) and c) DISPLACEMENT

The Uniform Relocation Act (46 U.S.C. § 4600 et seq.), passed by Congress in 1970, its implementing regulations (49 C.F.R.) Part 24); and, the California Relocation Assistance Law, California Government Code Section 7260 et seq (the "CRAL") and the California Relocation Assistance and Real Property Acquisition Guidelines, Title 25, California Code of Regulations, Chapter 6, Section 6000 et seq. (jointly the "Rules and Regulations") establish minimum standards for federally and locally funded programs and projects that require the acquisition of real property (real estate) or displace persons from their homes, businesses, or farms. The Rules and Regulation's protection and assistance apply to the acquisition, rehabilitation, or demolition of real property for federal or federally-funded projects.

Residents will be displaced by the project; the project is subject to the "Rules and Regulations" defined above and a conforming relocation plan will be developed and implemented. Residents will not be displaced in significant numbers to necessitate the construction of housing elsewhere. Implementation of a qualified relocation plan reduces the impact to ***less than significant with mitigation.*** Source documentation: [46]

Mitigations

The following mitigation measure is provided to ensure that displacement prior to project construction results in a smooth and orderly relocation for the existing residents:

U1. The project will involve relocation of residents. The project will be subject to the Uniform Relocation Act (46 U.S.C. § 4600 et seq.), passed by Congress in 1970, its implementing regulations (49 C.F.R.) Part 24); the California Relocation Assistance Law, California Government Code Section 7260 et seq (the "CRAL") and the California Relocation Assistance and Real Property Acquisition Guidelines, Title 25, California Code of Regulations, Chapter 6, Section 6000 et seq. (jointly the "Rules and Regulations"). A conforming relocation plan has been developed and is being implemented.

XIV. PUBLIC SERVICES Would the project result in a substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government 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?:	*Potentially Significant Impact*	*Less than significant with Mitigation*	*Less than significant*	*No Impact*
a) Fire protection?			X	
b) Police protection?			X	
c) Schools?				X
d) Parks?			X	
e) Other public facilities?			X	

a) FIRE PROTECTION

The Livermore-Pleasanton Fire Department (LPFD) would provide fire suppression services to the project site. The nearest fire station is located approximately 0.8 miles northeast of the project site at 3560 Nevada Street in Pleasanton. The Livermore-Pleasanton Fire Department (LPFD) is an all risk emergency response and community service organization serving the Cities of Livermore and Pleasanton. The Department's stated core purpose is to make the Livermore and Pleasanton communities safe for all citizens to live and work through the protection of life, property, and the environment. The Department seeks to minimize risk to the community by responding to all fire, medical, rescue, and hazardous materials incidents.

To meet the needs of the Livermore and Pleasanton communities, the LPFD has eight engine companies and two truck companies strategically located in ten fire stations throughout the Cities of Livermore and Pleasanton, to provide:

- Fire Suppression
- Emergency Hazardous Materials Response
- Emergency Medical Service
- Specialized Rescue

Located at the LPFD Headquarters in Pleasanton are the Department's administrative and non-emergency safety services, which include:

- Fire Prevention and Hazardous Materials Regulations
- Emergency Medical Services System Management

- Disaster Preparedness
- Training
- Information Technology
- Finance
- Public Information

The first LPFD unit arrives on the scene of an emergency incident within 7 minutes from the time of dispatch over 90% of the time. Extended response times are often the result of congested traffic particularly on freeway incidents.

Approximately 67% of LPFD's calls are for emergency medical care. Each engine or truck company in the LPFD is staffed with 3-4 people of which at least one must be a paramedic. All LPFD Paramedics are licensed by the State of California and Emergency Medical Technicians (EMTs) are accredited in Alameda County. Currently, the LPFD has 54 licensed paramedics and 51 certified EMTs. LPFD EMTs and paramedics provide medical aid for all people who need it for conditions including acute and chronic disease and traumatic injuries.

The project will be designed and operated in accordance with the provisions of the Uniform Fire Code, including Amendments, set forth in Chapter 18-44 Uniform Fire Code. Because no fire stations are located onsite or immediately surrounding the project site, project construction would not impact fire stations. The project will not require significant new fire protection service in the area.

The project location and proposed site layout provides adequate access for fire vehicles. The project will not create a burden on existing services and will not require significant new fire or police protection services in the area. The final project design would be subject to review and approval by the Livermore-Pleasanton Fire Department staff, resulting in ***less than significant*** impact. Source documentation: [(5) (47) (48)]

b) POLICE PROTECTION

The City of Pleasanton's Police Department would provide police services to the project site. The nearest police station is located 0.6 miles southwest of the project site at 4833 Bernal Avenue in Pleasanton. The average overall response time for 2012 was 18:40 minutes per call and the average response time for emergency calls in 2012 was 4:07 minutes. The number of citizen-initiated calls in 2012 was 33,857 and Officer-initiated calls numbered 28,459 the same year. Additionally, the Alameda County Sheriff's Department is located 2.3 miles northwest of the project site at 5672 Stoneridge Drive in Pleasanton.

The proposed project, 172-189 units of senior housing, would not likely cause an increase in demand for police services beyond what is already provided for in the area. No new facility would be required in order for police to respond effectively to the potential increase in criminal activity that would result from the proposed project. Therefore, while the proposed project may increase the need for police response to crimes in the project area, this impact is considered ***less than significant***. No mitigation is required. Source documentation: [(49)]

c) SCHOOLS

As a senior housing project, there will be ***no impact*** to schools in the area. Source documentation: [(4)]

d) and e) CULTURAL AND OTHER PUBLIC FACILITIES

The project is approximately 0.3 miles from Main Street, where shops, restaurants, banks, pharmacies and many other commercial facilities can be found within walking distance. The Stoneridge Mall is approximately 4 miles northwest of the project, which contains major stores and restaurants.

The proposed project is within one mile of two art galleries, a museum, two convention centers, and four landmarks. The Pleasanton Library is approximately 0.64 miles from the project site.

The addition of at most 435 residents would not constitute a significant impact to the availability of commercial facilities to residents of the proposed project.

Due to the relatively small size of the proposed project, none of these facilities would be adversely affected by the additional patronage generated by it, resulting in ***less than significant*** impact. Source documentation: [(3) (5)]

XV. RECREATION Would the project:	*Potentially Significant Impact*	*Less than significant with Mitigation*	*Less than significant*	*No Impact*
a) 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?			x	
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			x	

SETTING

The project site is located adjacent to Kottinger Village Community Park, a 4.9-acre neighborhood park with basketball courts, picnic tables, tot lot play area and youth play area.

IMPACTS

a) and b) PARKS & OPEN SPACE

The City of Pleasanton offers 42 community and neighborhood parks, approximately 24 miles of trails and over 800 acres of undeveloped open space. Community parks are intended for community-wide use, and feature a variety of amenities. A neighborhood park is intended to serve the immediate neighborhood, but is open for use by the general public, and has limited amenities. Many neighborhood parks are located within ½ mile of the residential neighborhoods they serve, which is a goal in the City's General Plan. Parks are as small as 1/3 acre (Veterans Plaza Park in the Downtown area) and as large as 104 acres (Sports and Recreation Community Park). The City also has Augustin Bernal Park, a 237-acre park located on Pleasanton Ridge and adjacent to park land Pleasanton Ridge Regional Park of the East Bay Regional Park District, a 5,271-acre park. Both parks provide an opportunity to appreciate magnificent views of the valley.

A fully restored interpretive Alviso Adobe Park reveals the history of the Amador Valley and a glimpse of times past. City of Pleasanton parks offer unique features, such as a BMX Facility on Stanley Blvd. near Shadow Cliffs. Located at 1000 Kottinger Road is Kottinger Park, a 14.5-acre community park that has a barbeque pit, picnic tables and public art.

There are approximately 24 miles of trails within Pleasanton for the community's enjoyment, including 3 miles of new trails around the Callippe Preserve Golf Course and 1 additional mile segment of the regional Iron Horse Trail.

Within approximately 2 miles of the project are Kottinger Village Community Park, Kottinger Park, McKinley Park, Lions Wayside Park, Main Street Green, Tawny Park, Vintage Hills Park, and Shadow Cliffs Regional Recreation Area. Because of its small size (a maximum of 435 senior residents) relative to the amount of open space and parks in the vicinity, the development would not generate a significant new demand for parks or other recreational facilities. The project would not require the construction or expansion of recreational facilities, so that there would be

no significant or cumulative effects on the environment from this issue; therefore the impact is ***less than significant.*** Source documentation: [5] [51]

XVI. TRANSPORTATION Would the project:	*Potentially Significant Impact*	*Less than significant with Mitigation*	*Less than significant*	*No Impact*
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 related components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?			X	
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 designed roads or highways?			X	
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?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible land uses (e.g., farm equipment)?			X	
e) Result in inadequate emergency access?			X	
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?			X	

SETTING

The project as proposed includes the development of up to 189 residential units for seniors on sites located at 240 Kottinger Drive (Kottinger Place) and 251 Kottinger Drive (Pleasanton Gardens) in the City of Pleasanton, as shown in Figure 1. Currently, the two project sites are occupied by 90 residential units (50 on the Kottinger Place site and 40 on the Pleasanton Gardens site) for seniors. The proposed project would demolish the existing units and build up to 59 new units on the Pleasanton Gardens site and up to 130 units on the Kottinger Place site, for a net increase of 99 senior residential units. As part of the proposed project, the Regalia House site located at 4133 Regalia Court and a vacant parcel located at 418 Vineyard Avenue would be incorporated into the new plan for Kottinger Place. The Kottinger Place project site would be accessed via three access points: two on Vineyard Avenue and one on Kottinger Drive, while the Pleasanton Gardens project site would be accessed via one access point on Kottinger Drive.

In June 2013, a traffic impact analysis was performed for the project by Whitlock & Weinberger, Inc. (w-trans). The figure that follows depicts the area and intersections studied and analyzed by w-trans.

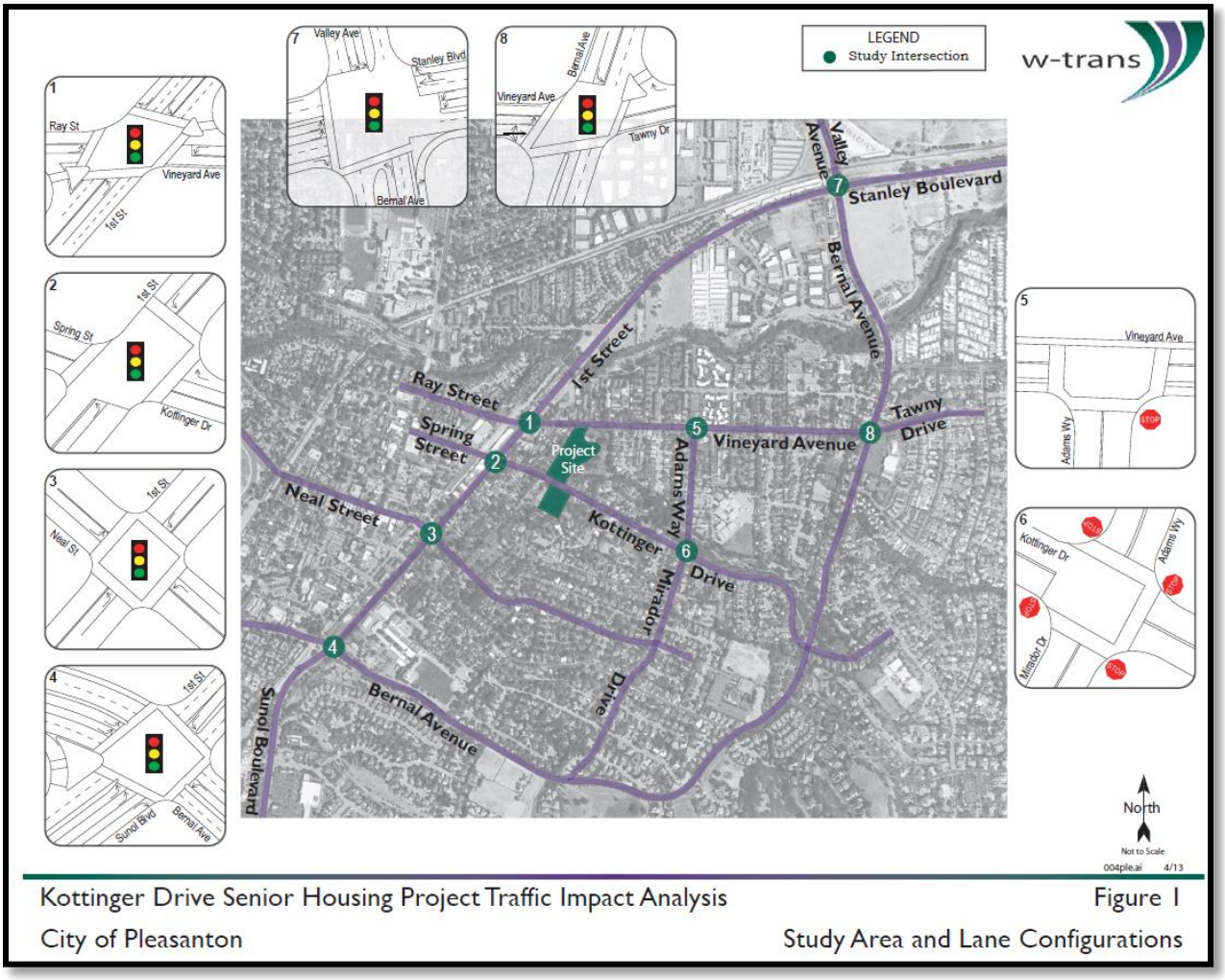


Figure 11 Traffic Analysis Study Area and Lane Configurations

The study area includes the immediate site vicinity and local roadways, as well as the following eight intersections:

1. 1st Street/Vineyard Avenue-Ray Street
2. 1st Street/Kottinger Drive-Spring Street
3. 1st Street/Neal Street
4. 1st Street/Bernal Avenue
5. Vineyard Avenue/Adams Way
6. Kottinger Drive/Adams Way-Mirador Drive
7. Stanley Boulevard/Bernal Avenue-Valley Avenue
8. Bernal Avenue/Vineyard Avenue-Tawny Drive

Operating conditions during typical weekday the a.m. and p.m. peak periods were evaluated to capture the highest potential impacts for the proposed project as well as the highest volumes on the local transportation network. The morning peak hour occurs between 7:00 and 9:00 a.m. and reflects conditions during the home to work or school

commute, while the p.m. peak hour occurs between 4:00 and 6:00 p.m. and typically reflects the highest level of congestion during the homeward bound commute.
At the direction of City of Pleasanton staff, traffic volume data presented in the recently approved *Pleasanton Housing Element Transportation Analysis* (Fehr & Peers, 2011), were incorporated into the analysis. Existing traffic volume data were not available for the study intersections of Kottinger Drive/Adams Way and Vineyard Avenue/Adams Way; therefore, new a.m. (7:00-9:00) and p.m. (4:00-6:00) peak hour turning movement counts were conducted in April 2013.

Study Intersections

1st Street/Ray Street-Vineyard Avenue is a four-way, signalized intersection with protected left-turn phasing on the northbound and southbound 1st Street approaches and split, or exclusive, phasing on the eastbound Ray Street approach and westbound Vineyard Street approach. Marked crosswalks are provided across all legs of the intersection, along with pedestrian signals and push buttons.

1st Street/Kottinger Drive-Spring Street is a signalized four-legged intersection with permissive left-turn phasing on all approaches. Marked crosswalks and pedestrian signal heads with push buttons are provided across all legs of the intersection except the southern leg.

1st Street/Neal Street is a four-legged, signalized intersection with permissive left-turn phasing on all approaches. Marked crosswalks and pedestrian crossing signal equipment are provided across all legs of the intersection.

1st Street/Bernal Avenue is a four-legged signalized intersection with protected left-turn phasing on all approaches. Marked crosswalks and pedestrian crossing signal equipment are provided across all legs of the intersection.

Vineyard Avenue/Adams Way is an unsignalized tee-intersection with the eastbound and westbound Vineyard Street approaches being free and the northbound Adams Way approach being stop controlled. Marked crosswalks are provided across all legs of the intersection.

Kottinger Drive/Adams Way-Mirador Drive is a four-way, all-way stop-controlled intersection. Marked crosswalks are provided across all legs of the intersection except the western leg.

Stanley Boulevard/Bernal Avenue-Valley Avenue is a four-legged, signalized intersection with protected left-turn phasing on all approaches. Marked crosswalks and pedestrian crossing signal equipment are provided across the southern and western legs.

Bernal Avenue/Vineyard Avenue-Tawny Drive is a four-legged, signalized intersection with protected left-turn phasing on the northbound and southbound Bernal Avenue approaches and exclusive left–turn phasing on the eastbound and westbound Kottinger Drive-Tawny Drive approaches. Marked crosswalks with pedestrian signal heads and push buttons are provided across all legs of the intersection except the southern leg.

Alternative Modes of Transportation

Pedestrian Facilities

Pedestrian facilities include sidewalks, crosswalks, pedestrian signal phases, curb ramps, curb extensions, and various streetscape amenities such as lighting, benches, etc. In general, a network of sidewalks, crosswalks, pedestrian

signals, and curb ramps provide access for pedestrians in the vicinity of the proposed project site. Marked crosswalks and pedestrian signal phasing are provided at all signalized intersections. Additionally, a mid-block crosswalk exists on Kottinger Drive near the project vicinity providing pedestrian connectivity between the Pleasanton Gardens and Kottinger Place sites.

Bicycle Facilities

The *Highway Design Manual,* California Department of Transportation (Caltrans), 2012, classifies bikeways into three categories:

- *Class I Multi-Use Path:* 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:* a striped and signed lane for one-way bike travel on a street or highway.
- *Class III Bike Route*: signing only for shared use with motor vehicles within the same travel lane on a street or highway.

Within the project vicinity, Class II bike lanes exist on Vineyard Avenue, First Street north of Vineyard Avenue, and Bernal Avenue south of Stanley Boulevard.

Transit Facilities

Transit service in Pleasanton is provided by three agencies: The Livermore Amador Valley Transit Authority provides fixed route bus service, and the Bay Area Rapid Transit District (BART) and the Altamont Commuter Express (ACE) both operate commuter rail service. Following is a summary of the transit lines that currently service the project site.

Wheels Bus

The Livermore Amador Valley Transit Authority provides fixed route bus service under the name "Wheels" in the City of Pleasanton as well as the neighboring Cities of Dublin, Livermore, and unincorporated portions of Alameda County.

Wheels Bus Route 8 provides weekday and weekend (Saturday) service along Kottinger Drive and Vineyard Avenue between the East Dublin/Pleasanton BART Station and Downtown Pleasanton connecting Hopyard Road, Civic Center, Senior Center, Fairgrounds and Vintage Hills. During weekdays, service is provided between 6:00 a.m. and 7:00 p.m. with about 60-minute headways. On Saturdays, service is provided between 6:00 a.m. and 9:00 p.m. with approximately 60 to 120 minute headways. Bus stops are provided in both the eastbound and westbound directions along the Kottinger Place site frontage. The eastbound direction bus stop is on the south side of Vineyard Avenue just east of Regalia Court. The westbound direction bus stop is on the north side of Kottinger Drive approximately 190 feet east of 2nd Street.

Wheels Bus Route 10 provides weekday and weekend service along 1st Street between the East/Dublin Pleasanton Station to the west and Livermore Transit Center and beyond to the east. On weekday evenings and weekends, this route continues east to the Stoneridge Mall. Service is generally provided between 4:30 a.m. and 12:30 a.m. with approximately 30 to 40 minute headways. Bus stops are provided in both the northbound and southbound directions on 1st Street near the project vicinity. The northbound direction bus stop is located on the east side of 1st Street just north of Kottinger Drive. The southbound direction bus stop is located on the west side of 1st Street approximately 200 feet north of Kottinger Drive.

Two bicycles can be carried on most Wheels buses. Bike rack space is on a first come, first served basis. Additional bicycles are allowed on Wheels buses at the discretion of the driver.

Dial-a-ride, also known as paratransit, or door-to-door service, is available for those who are unable to independently use the transit system due to a physical or mental disability. The City of Pleasanton Dial-a-ride is designed to serve the needs of individuals with disabilities within Pleasanton which is supplemented by the Livermore Amador Valley Transit Authority in the greater Livermore-Amador Valley region.

BART

The Bay Area Rapid Transit District (BART) provides heavy-rail rapid transit service within Alameda, Contra Costa, San Francisco and San Mateo Counties. The East Dublin/Pleasanton station, located along I-580 between Hopyard Road-Dougherty Road and Hacienda Drive, is the easternmost station along that segment of the BART system and is approximately four miles northwest of the proposed project site. Additionally the West Dublin Pleasanton station, located near the Stoneridge Mall, serves the City. One line provides service to the two Dublin/Pleasanton stations with the line terminating in Daly City. Passengers can transfer to other BART lines that terminate at Richmond, Pittsburg/Bay Point, Fremont, Millbrae and the San Francisco International Airport. Wheels Bus Route 8 provides service between the project site and the East Dublin/Pleasanton BART Station.

ACE

The Altamont Commuter Express (ACE) is an intra-city rail transit service that provides commuter service between Stockton and San Jose with ten stations. Four westbound trains are provided in the morning and four eastbound trains are provided in the evening. The ACE station in Pleasanton is located at Pleasanton Avenue north of Bernal Avenue. Wheels Bus Route 8 does not provide direct service between the project site and the Pleasanton ACE station.

Intersection Level of Service Methodologies

Level of Service (LOS) is used to rank traffic operation on various types of facilities based on traffic volumes and roadway capacity using a series of letter designations ranging from A to F. Generally, Level of Service A represents free flow conditions and Level of Service F represents forced flow or breakdown conditions. A unit of measure that indicates a level of delay generally accompanies the LOS designation.

The study intersections were analyzed using methodologies published in the *Highway Capacity Manual* (HCM), Transportation Research Board, 2000. This source contains methodologies for various types of intersection control, all of which are related to a measurement of delay in average number of seconds per vehicle. The use of these methodologies is consistent with the recently completed City of Pleasanton Housing Element traffic analysis.

Traffic Operation Standards

The City of Pleasanton has adopted an LOS standard of D or better for intersection operations per the General Plan (adopted July 2009). However, there are a few exceptions to the LOS D standard in the Downtown area and at the City of Pleasanton gateway intersections. These intersections may have a level of service below the LOS D standard if no reasonable mitigation exists or if the necessary mitigation is contrary to other goals and policies of the City. Traffic impacts at the study intersections would be considered significant if the project would result in any of the following:

Signalized Intersections

- Deterioration of a signalized intersection from LOS D (or better) to LOS E or LOS F
- The project adds ten or more trips to a signalized intersection projected to operate at LOS E prior to the addition of project traffic

Unsignalized Intersections

- Deterioration of a controlled movement at an unsignalized intersection from LOS E or better to LOS F, or at intersections where a controlled movement already operates at LOS F, one of the following:
    - Project traffic results in satisfaction of the peak hour volume traffic signal warrant;
    - Project traffic increases minor movement delay by more than 30 seconds; or
    - Where the peak hour volume signal warrant is met without Project traffic and delay cannot be measured, Project increases traffic by 10 or more vehicles per lane on the controlled approach.

Existing Conditions

The Existing Conditions scenario provides an evaluation of current operation based on existing traffic volumes during the a.m. and p.m. peak periods. This condition does not include project-generated traffic volumes.

Under existing conditions, all study intersections operate acceptably at LOS D or better except for the intersection of First Street/Bernal Avenue-Sunol Boulevard, which currently operates at LOS E during the p.m. peak hour. According to the *City of Pleasanton General Plan*, Downtown intersections, including 1st Street/Bernal Avenue-Sunol Boulevard, are exempt from the LOS D standard.

Traffic Impact Fee (TIF) Program

The City of Pleasanton has established a Traffic Impact Fee (TIF) program to fund future enhancements to the transportation network based on anticipated needs. As part of the City's program, there are plans to modify the following two intersections:

Stanley Boulevard/Bernal Avenue-Valley Avenue: The westbound Stanley Boulevard approach is to be converted to two left-turn lanes, two through lanes and a free right-turn lane. Additionally, the eastbound approach would be modified to provide two left turn lanes, two through lanes and a shared through/right-turn lane. These improvements were included for the analysis of Existing plus Approved Projects and Cumulative Conditions scenarios.

1st Street/Bernal Avenue-Sunol Boulevard: The westbound Bernal Avenue approach is to be converted to two left-turn lanes, one through lane and a shared through/right-turn lane. Per the City's direction, this improvement was included for the analysis of only the Cumulative Conditions scenario.

IMPACTS

a), b) and f) TRAFFIC IMPACT ANALYSIS

Trip Generation

The anticipated trip generation for the proposed project was estimated using land use Senior Adult Housing-Attached (ITE Trip Generation Land Use #252) published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual,* 9th Edition, 2012. Because the site is currently occupied by 90 housing units for seniors, the trip generation of the existing use was also considered. The proposed project is expected to result in a net increase of 295 daily trips, including 20 a.m. peak hour trips and 24 p.m. peak hour trips.

Existing plus Project Conditions

Upon the addition of project-related traffic to the Existing volumes, all of the study intersections but one are expected to operate acceptably at LOS D or better during both the a.m. and p.m. peak hours. The intersection of 1st Street/Bernal Avenue-Sunol Boulevard would continue to operate at an unacceptable LOS E during the p.m. peak hour.

The intersection of 1st Street/Bernal Avenue-Sunol Boulevard currently operates at an unacceptable LOS E during the p.m. peak hour. With the addition of the proposed project, the intersection would continue to operate at an unacceptable LOS E. However, according to the *City of Pleasanton General Plan*, Downtown intersections such as 1st Street/Bernal Avenue-Sunol Boulevard are exempt from the LOS D standard unless the City determines that improvements necessary to maintain LOS D are consistent with the goals for the *Downtown Specific Plan*.

Finding: The study intersections are expected to continue operating at an acceptable level of service with the addition of project-generated traffic except for the intersection of 1st Street/Bernal Avenue- Sunol Boulevard which would continue to operate at an unacceptable LOS E. However, according to the *City of Pleasanton General Plan*, Downtown intersections such as 1st Street/Bernal Avenue-Sunol Boulevard are exempt from the LOS D standard.

Table 11 Existing and Existing plus Project Peak Hour Intersection Levels of Service

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. 1st St/Vineyard Ave-Ray St	20.5	C	28.5	C	20.6	C	28.7	C
2. 1st St/Kottinger Dr-Spring St	18.3	B	21.1	C	18.9	B	21.7	C
3. 1st St/Neal St	14.8	B	19.8	B	14.8	B	19.9	B
4. 1st St/Bernal Ave-Sunol Blvd*	33.8	C	**65.9**	**E**	33.9	C	**66.6**	**E**
5. Vineyard Ave/Adams Way	6.6	A	1.8	A	6.7	A	1.9	A
Northbound Adams Ave	*16.1*	*C*	*11.2*	*B*	*16.2*	*C*	*11.2*	*B*
6. Kottinger Dr/Adams Way-Mirador Dr	11.2	B	7.7	A	11.2	B	7.7	A
7. Stanley Blvd/Bernal Ave-Valley Ave	52.2	D	47.4	D	52.3	D	47.4	D
8. Bernal Ave/Vineyard Ave-Tawny Dr	17.4	B	10.7	B	17.5	B	10.7	B

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics*; **Bold** text = deficient operation; *According to the *City of Pleasanton General Plan*, Downtown intersections, including 1st Street/Bernal Avenue-Sunol Boulevard, are exempt from the LOS D standard

Existing plus Approved Projects Conditions

Existing plus Approved Projects operating conditions were determined with traffic that would be generated by all approved and pending projects, added to existing traffic volumes, including the City's Housing Element, as contained in the City's Synchro traffic model. It should be noted that the planned TIF improvements at the intersection of Stanley Boulevard/Bernal Avenue-Valley Avenue were included in this analysis. Under these conditions, all of the study intersections are expected to operate at an acceptable LOS D or better, except for the intersection of 1st Street/Bernal Avenue-Sunol Boulevard, which would operate at an unacceptable LOS E during the p.m. peak hour.

Table 12 Existing plus Approved Projects Peak Hour Intersection Levels of Service

Study Intersection *Approach*	Existing Plus Approved Conditions			
	AM Peak		PM Peak	
	Delay	LOS	Delay	LOS
1. 1st St/Vineyard Ave-Ray St	20.6	C	26.9	C
2. 1st St/Kottinger Dr-Spring St	34.0	C	34.1	C
3. 1st St/Neal St	17.5	B	34.2	C
4. 1st St/Bernal Ave-Sunol Blvd*	47.4	D	**79.6**	**E**
5. Vineyard Ave/Adams Way	6.6	A	1.8	A
Northbound Adams Ave	*16.7*	*C*	*11.2*	*B*
6. Kottinger Dr/Adams Way-Mirador Dr	11.5	B	7.8	A
7. Stanley Blvd/Bernal Ave-Valley Ave	27.0	C	29.4	C
8. Bernal Ave/Vineyard Ave-Tawny Dr	25.3	C	10.8	B

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics*; **Bold** text = deficient operation; *According to the *City of Pleasanton General Plan*, Downtown intersections, including 1st Street/Bernal Avenue-Sunol Boulevard, are exempt from the LOS D standard; Shaded cells = conditions with planned TIF improvements

Existing plus Approved Projects plus Project Conditions

Upon the addition of project-related traffic added to Existing plus Approved Projects volumes, and the planned TIF improvements, all of the study intersections are anticipated to operate at an acceptable LOS D or better, except for the intersection of 1st Street/Bernal Avenue-Sunol Boulevard, which would deteriorate from LOS E to LOS F during the p.m. peak hour. However, according to the *City of Pleasanton General Plan*, Downtown intersections such as 1st Street/Bernal Avenue-Sunol Boulevard are exempt from the LOS D standard unless the City determines that improvements necessary to maintain LOS D are consistent with the goals for the *Downtown Specific Plan.*

Table 13 Existing plus Approved Projects plus Project Peak Hour Intersection Levels of Service

Study Intersection *Approach*	Without Project				With Project			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. 1st St/Vineyard Ave-Ray St	20.6	C	26.9	C	20.7	C	27.1	C
2. 1st St/Kottinger Dr-Spring St	34.0	C	34.1	C	35.2	D	36.0	D
3. 1st St/Neal St	17.5	B	34.2	C	17.5	B	34.8	C
4. 1st St/Bernal Ave-Sunol Blvd*	47.4	D	**79.6**	**E**	47.9	D	**80.4**	**F**
5. Vineyard Ave/Adams Way	6.6	A	1.8	A	6.7	A	1.8	A
Northbound Adams Ave	*16.7*	*C*	*11.2*	*B*	*16.8*	*C*	*11.2*	*B*
6. Kottinger Dr/Adams Way-Mirador Dr	11.5	B	7.8	A	11.5	B	7.8	A
7. Stanley Blvd/Bernal Ave-Valley Ave	27.0	C	29.4	C	27.0	C	29.4	C
8. Bernal Ave/Vineyard Ave-Tawny Dr	25.3	C	10.8	B	25.4	C	10.9	B

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics*; **Bold** text = deficient operation; *According to the *City of Pleasanton General Plan*, Downtown intersections, including 1st Street/Bernal Avenue-Sunol Boulevard, are exempt from the LOS D standard; Shaded cells = conditions with planned TIF improvements

Cumulative Conditions

Cumulative peak hour volume projections were taken from the build-out analysis contained in the *Pleasanton Housing Element Transportation Analysis*. This scenario represents cumulative traffic conditions that would be expected upon build out of the land uses identified in the *General Plan*, including the updated Housing Element. It should be noted that the planned TIF improvements at the intersections of 1st Street/Bernal Avenue-Sunol Boulevard and Stanley Boulevard/Bernal Avenue-Valley Avenue are included in the analysis.

Under the anticipated Future volumes and considering the planned TIF improvements at the intersections of 1st Street/Bernal Avenue-Sunol Boulevard and Stanley Boulevard/Bernal Avenue-Valley Avenue, all of the study intersections but one are expected to operate at an acceptable LOS D or better. The intersection of 1st Street/Bernal Avenue-Sunol Boulevard is expected to operate at an unacceptable LOS E during the p.m. peak hour even after the implementation of the planned improvements. However, according to the *City of Pleasanton General Plan*, Downtown intersections such as 1st Street/Bernal Avenue-Sunol Boulevard are exempt from the LOS D standard unless the City determines that improvements necessary to maintain LOS D are consistent with the goals for the *Downtown Specific Plan*.

Table 14 Cumulative Peak Hour Intersection Levels of Service

Study Intersection *Approach*	Cumulative Conditions			
	AM Peak		PM Peak	
	Delay	LOS	Delay	LOS
1. 1st St/Vineyard Ave-Ray St	19.5	B	25.2	C
2. 1st St/Kottinger Dr-Spring St	48.7	D	22.1	C
3. 1st St/Neal St	19.2	B	39.5	D
4. 1st St/Bernal Ave-Sunol Blvd*	36.1	D	**76.6**	**E**
5. Vineyard Ave/Adams Way	7.9	A	2.0	A
Northbound Adams Ave	*20.5*	*C*	*11.4*	*B*
6. Kottinger Dr/Adams Way-Mirador Dr	12.6	B	8.0	A
7. Stanley Blvd/Bernal Ave-Valley Ave	31.2	C	32.4	C
8. Bernal Ave/Vineyard Ave-Tawny Dr	35.8	D	12.3	B

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics*; **Bold** text = deficient operation; *According to the *City of Pleasanton General Plan*, Downtown intersections, including 1st Street/Bernal Avenue-Sunol Boulevard, are exempt from the LOS D standard; Shaded cells = conditions with TIF planned improvements

Some intersections are expected to operate better under Cumulative conditions than they would under the Existing plus Approved Projects Conditions. This is attributed to the fact that the City is anticipating regional improvements that would increase capacity elsewhere, resulting in a shift in traffic patterns.

Cumulative plus Project Conditions

Upon the addition of project-generated traffic to the anticipated Cumulative volumes, the 1st Street Street/Bernal Avenue-Sunol Boulevard intersection is expected to continue operating at an unacceptable LOS E during the p.m. peak hour. As discussed previously, this intersection is exempt from the LOS D standard unless the City determines that improvements are necessary to maintain a LOS D standard. All of the remaining intersections would continue to operate at an acceptable LOS D or better with the addition of project generated traffic.

Table 15 Cumulative and Cumulative plus Project Peak Hour Intersection Levels of Service

Study Intersection *Approach*	Cumulative				Cumulative plus Project			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. 1st St/Vineyard Ave-Ray St	19.5	B	25.2	C	19.6	B	25.3	C
2. 1st St/Kottinger Dr-Spring St	48.7	D	22.1	C	49.8	D	23.5	C
3. 1st St/Neal St	19.2	B	39.5	D	19.5	B	40.1	D
4. 1st St/Bernal Ave-Sunol Blvd*	36.1	D	**76.6**	**E**	36.3	D	**77.4**	**E**
5. Vineyard Ave/Adams Way	7.9	A	2.0	A	7.9	A	2.0	A
Northbound Adams Ave	*20.5*	*C*	*11.4*	*B*	*20.6*	*C*	*11.5*	*B*
6. Kottinger Dr/Adams Way-Mirador Dr	12.6	B	8.0	A	12.6	B	8.0	A
7. Stanley Blvd/Bernal Ave-Valley Ave	31.2	C	32.4	C	31.2	C	32.4	C
8. Bernal Ave/Vineyard Ave-Tawny Dr	35.8	D	12.3	B	35.9	D	12.3	B

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics*; **Bold** text = deficient operation; *According to the *City of Pleasanton General Plan*, Downtown intersections, including 1st Street/Bernal Avenue-Sunol Boulevard, are exempt from the LOS D standard; Shaded cells = conditions with TIF planned improvements

Upon the addition of project-generated traffic, the study intersections are expected to operate at an acceptable level of service except for 1st Street/Bernal Avenue-Sunol Boulevard which would continue to operate at an unacceptable LOS E. However, according to the *City of Pleasanton General Plan*, Downtown intersections (1st Street/Bernal Avenue-Sunol Boulevard) are exempt from the LOS D standard unless the City determines that improvements necessary to maintain LOS D are consistent with the goals for the *Downtown Specific Plan.*

QUEUING

At the intersection of 1st Street/Vineyard Avenue-Ray Street, the westbound left-turn queue length is expected to exceed the available storage length under all scenarios without and with the addition of project-generated trips. During the p.m. peak hour, the southbound left-turn queue is expected to fit within the available storage length, without and with the project under both scenarios. The southbound left-turn queue at the 1st Street/Kottinger Drive-Spring Street intersection is expected to be accommodated within the available storage length under Existing plus Approved Projects Conditions, and exceed the storage length under Cumulative Conditions without and with the project. The increase in queue length due to the addition of the project-generated traffic would be *less-than-significant.*

CONCLUSION

The project is anticipated to generate an average of 295 net new trips on a daily basis, of which 20 trips would occur during the morning peak hour and 24 trips during the evening peak hour. Currently the study intersection of 1st Street/Bernal Avenue-Sunol Boulevard operates unacceptably at LOS E during the p.m. peak hour and it would

continue to do so under all study scenarios without and with the addition of project-generated traffic. However, according to the *City of Pleasanton General Plan*, Downtown intersections, including 1st Street/Bernal Avenue-Sunol Boulevard, are exempt from the LOS D standard unless the City determines that improvements necessary to maintain LOS D are consistent with the goals for the *Downtown Specific Plan.* All the remaining study intersections would operate at acceptable levels of service under all study scenarios without and with the addition of project-generated traffic.

The proposed project would provide 152 parking spaces which is expected to be adequate to satisfy the projected parking demand of 0.8 parking spaces per dwelling unit, which is the same as the current site.

Pedestrian and bicycle access to the site is expected to be adequate. Separate pedestrian entrances on Kottinger Drive would be provided to connect the Pleasanton Gardens and Kottinger Place sites and avoid pedestrian access through the parking lot. Existing transit route and bus stops adjacent to the project site on Kottinger Drive, Vineyard Avenue and 1st Street would adequately serve the project-generated transit trips.

Impacts in this regard are considered ***less than significant***. Source documentation: [44]

c) AIR TRAFFIC PATTERNS

The nearest airport to the site is minor airport Livermore Municipal Airport, approximately 3.42 miles north-northeast of the project site. No impact zones or clear zones extend to the site. The runways are perpendicular to the project site; therefore overhead traffic heading toward the airport is at a minimum. There would be ***no impact*** to air traffic patterns as a result of the proposed project. Source documentation: [3] [5] [34]

d) TRAFFIC HAZARDS

Access to the project site would be provided via two existing driveways on Kottinger Drive and one on Vineyard Avenue together with one proposed new full access driveway on Vineyard Avenue. To maintain clear sight lines, it is recommended that on-street parking be prohibited for 50 feet on either side of the proposed driveway and 50 feet west of the existing driveway on Vineyard Avenue. Additionally, periodic maintenance, including trimming of the vegetation on both sides of the project driveways on Kottinger Drive and Vineyard Avenue, should be undertaken. Project impacts are ***less than significant with mitigation.*** Source documentation: [44]

e) EMERGENCY ACCESS

Access to the project site would be provided via two existing driveways on Kottinger Drive and one on Vineyard Avenue together with one proposed new full access driveway on Vineyard Avenue. To maintain clear sight lines, it is recommended that on-street parking be prohibited for 50 feet on either side of the proposed driveway and 50 feet west of the existing driveway on Vineyard Avenue. Additionally, periodic maintenance, including trimming of the vegetation on both sides of the project driveways on Kottinger Drive and Vineyard Avenue, should be undertaken.

Emergency access will be reviewed by the City of Pleasanton Fire Department to ensure site access is adequate for emergency vehicles. Project impacts are ***less than significant***. Source documentation: [3] [44]

Mitigations

These conditions address any visibility issues for motorists exiting the proposed project site from the driveways.

TR1. It is recommended that on-street parking be prohibited for 50 feet on either side of the proposed driveway and 50 feet west of the existing driveway on Vineyard Avenue to maintain clear sight lines and reduce potential conflicts between the existing and proposed driveway.

TR2. It is recommended that periodic maintenance, including trimming of the vegetation on both sides of the project driveways on Kottinger Drive and Vineyard Avenue, be undertaken to maintain clear sight lines.

XVII. UTILITIES AND SERVICE SYSTEMS Would the project:	*Potentially Significant Impact*	*Less than significant with Mitigation*	*Less than significant*	*No Impact*
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			x	
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?			x	
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?			x	
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?		x		
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?			x	
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			x	
g) Comply with federal, state, and local statutes and regulations related to solid waste?				x

a), b) and e) WASTE WATER

The Sewer Division of the City of Pleasanton provides sewer services to the project area. The Sewer Division maintains the City's sewerage system consisting of over 239 miles of sewer main ranging in diameter between 6 inches and 33 inches. The City of Pleasanton contracts with the Dublin San Ramon Services District (DSRSD) to treat its wastewater at a regional treatment plant located on Johnson Drive. The plant is located on the south of Stoneridge Drive and just west of the Val Vista Park in Pleasanton.

Pleasanton's treated wastewater is subsequently discharged into the San Francisco Bay for disposal through facilities owned by the Livermore Amador Valley Water Management Agency (LAVWMA). The City of Pleasanton owns and operates all of the sewer pipelines and pumping stations within the city needed to deliver the city's wastewater to DSRSD's Regional Wastewater Treatment Plant.

It is anticipated that the proposed project would represent only a small increase in the population of Pleasanton, so wastewater flows would also increase by a very small amount, and existing facilities are sufficient to convey and treat this increase. Project impacts are ***less than significant***. Source documentation: [52]

d) WATER SUPPLY

The City of Pleasanton's Water Division provides potable water to residents and businesses in Pleasanton.

The Water Division operates 16 pump stations throughout the City of which three are groundwater well pump stations used to augment the treated water that is distributed. In addition, the City operates six treated water stations where the final fluoridation process takes place. The Water Division operates and maintains 22 storage reservoirs spread strategically throughout the City. These reservoirs vary in size from 20,000 gallons to over eight million gallons each. These reservoirs are critical to provide the proper pressure in the system as well as supply during high demands and for emergency firewater protection.

2011 started out with above average rainfall but unfortunately ended with extremely dry winter months. As a result, the amount of precipitation that directly benefits the Tri- Valley has not been sufficient to substantially reverse the steady decline of water supplies we have been experiencing specifically over the last 4 years. While there is time for a late season recovery of the Northern Sierra snowpack, we must plan for the possibility that it will continue to remain below average. From a practical standpoint, that means an even greater emphasis on water conservation to protect impacted water resources. In 2007, court ordered pumping restrictions on water being provided from the Sacramento/San Joaquin Delta significantly cut surface water deliveries from the State Water Project (SWP) into the Tri-Valley area. To help bring up water reservoir levels and water cutbacks as a result of the environmental ruling, an aggressive water conservation goal was set by then California governor Arnold Schwarzenegger. Governor Schwarzenegger issued water conservation regulations requiring Californians to reduce their water use by 20 percent by year 2020 along with promoting other water conservation actions.

Zone 7 Water Agency, the Valley's water wholesaler, provides wholesale treated water to four major Valley water retailers, delivers untreated water to a number of agricultural customers, and monitors flood control measures and coordinates groundwater management resources in the Tri-Valley area. Approximately 80% of Pleasanton's water is purchased from Zone 7 and is comprised of treated surface water blended with some local groundwater. The remaining 20% comes from local groundwater pumped from wells owned and operated by the City of Pleasanton.

The City of Pleasanton's Water Division currently provides water service to the project site. At present, a 16" water main runs from Kottinger Drive down the center of the site to Vineyard Avenue. In consultation with the City of Pleasanton's Operations Services Department, it has been determined that this water main will be abandoned during redevelopment in order to remain consistent with current water main standards. As a result, the project will be required to upgrade the existing water main running under First Street and make the connection to vineyard Avenue at the same time. The project's impact on the supply of water would be ***less than significant with mitigation***. Source documentation: [4] [53]

f) and g) SOLID WASTE

Solid waste collection and disposal services for the proposed project would be provided by Pleasanton Garbage Service. The site is already served with solid waste disposal service; therefore the project only represents and incremental net increase over what is already provided. The creation of additional residences on the project site, any

associated jobs created and any minor increases in business activity in the surrounding commercial area would generate a small increase in demand for solid waste collection services. However, this small increase in demand would not exceed the capacity of or reduce the capability of services in Pleasanton and would not require the construction of additional solid waste management facilities. Project impacts are ***less than significant***.

The project will comply with all applicable federal, state, and local statutes and regulations related to solid waste. The project would have ***no impact*** in this regard. Source documentation: [55]

c) STORM WATER

A complete discussion of the effects of stormwater runoff can be found under section *IX. Hydrology and Water Quality.*

Mitigations

The following mitigation measure is to ensure adequate water supply will serve the redeveloped site:

WS1. In consultation with the City of Pleasanton's Operations Services Department, abandon the existing 16" water main that runs from Kottinger Drive down the center of the site to Vineyard Avenue and upgrade the existing water main running under First Street to current water main standards and connect to Vineyard Avenue.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE	*Potentially Significant Impact*	*Less than significant with Mitigation*	*Less than significant*	*No Impact*
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, substantially 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?		x		
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)?		x		
c) Does the project have environmental effects which cause substantial adverse effects on human beings, either directly or indirectly?		x		

a) QUALITY OF THE ENVIRONMENT

This Initial Study does not indicate that there are any biology, hydrology or water quality impacts associated with the proposed project that cannot be mitigated. There is no evidence to indicate that there are any fish or wildlife populations that would be significantly affected by the proposed project. Implementation of the project would not threaten to eliminate a plant or animal, nor reduce the number nor restrict the range of a rare or endangered plant or animal species. Source documentation: [18] [19]

There are no known historic or known cultural resources in the project area that could be adversely affected by the project. Source documentation: [7] [27]

The project will have an impact on the quality of the environment that is ***less than significant with mitigation.***

b) CUMULATIVE IMPACTS

The proposed project would not have impacts that are individually limited but cumulatively considerable. The Conditions of Approval would address the majority of the potential impacts for this project.

Issue areas that typically have the potential to result in cumulative impacts include Air Quality, Biological Resources, Land Use, Population (and corresponding impacts to Housing, Public Services, and Utilities and Services), and Transportation and Traffic. However, no cumulative impacts were identified in these areas, and the potential impacts in these areas are reduced to a ***less than significant with mitigation*** level through implementation of mitigation measures adopted as Conditions of Approval.

- Regarding Air Quality, the Project is consistent with the local CAP and the General Plan. The BAAQMD CEQA Guidelines state that if a project is consistent with the local CAP and General Plan, then it would not have a significant cumulative impact.

- Regarding Land Use, the project site is in an urbanized area, surrounded by like development, and would therefore be considered infill.

- Regarding Population (and associated issue areas), the proposed project would be consistent with both the General Plan and ABAG population projections; consequently, there would be no cumulative impacts to population associated issue areas such as Housing, Public Services or Utilities and Services.

- Finally, regarding Transportation and Traffic, the trip-generation analysis prepared for this project determined that the project would not contribute to any significant cumulative traffic impacts.

Therefore, for the reasons discussed above, there are no significant cumulative impacts as a result of this project. Source documentation:

c) ADVERSE EFFECTS ON HUMAN BEINGS

The project could have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly, including air quality, geological considerations, minor flooding, loss of cultural resources and noise. With the implementation of the required mitigation measures and all other requirements of the Alameda County General Ordinance, all of the identified impacts on the natural environment would be reduced to a level of ***less than significant with mitigation.*** Source documentation: [3]

CHAPTER 5. – OTHER SECTIONS REQUIRED BY NEPA

The National Environmental Policy Act (NEPA) requires consideration of physical and socioeconomic impacts beyond those required by the California Environmental Quality Act (CEQA). The purpose of this chapter is to address those additional NEPA requirements and to fulfill the additional environmental documentation required by the U.S. Department of Housing and Urban Development prior to its taking a federal action.

ENVIRONMENTAL JUSTICE

The project has no potential to create new or continued disproportionately high and adverse human health and environmental effects on minority or low-income populations and thus would not create environmental justice concerns. The project is in fact adding affordable housing units for seniors. The project is suitable for its proposed use. Source documentation: [3]

FLOODPLAIN MANAGEMENT (EXECUTIVE ORDER 11988)

Review of the Flood Insurance Rate Map Panel Number 06001C0336G, published by the Federal Emergency Management Agency (FEMA) dated August 3, 2009, indicates the proposed project is located in Zone X meaning that it is:

- an area outside the 1-percent annual chance floodplain,
- an area of 1% annual chance sheet flow flooding where average depths are less than 1 foot,
- an area of 1% annual chance stream flooding where the contributing drainage area is less than 1 square mile, or
- in areas protected from the 1% annual chance flood by levees.

No Base Flood Elevations or depths are shown within this zone, and insurance purchase is not required in these zones. Source documentation: [16]

WETLANDS PROTECTION (EXECUTIVE ORDER 11990)

The project is an infill development in an urban area. There are no wetlands, creeks or waterways on the site. The project location does not appear on the Department of Interior National Wetlands Inventory database. The proposed project does not require removal, filling, or hydrologic interruption to any watercourse. Impacts are considered *less than significant*. Source documentation: [15]

SOLE SOURCE AQUIFERS (40CFR149)

The project activities do not affect a sole source aquifer, as there are no aquifers subject to an MOU between EPA and HUD in Alameda County. Source documentation: [35]

ENDANGERED SPECIES ACT (5OCFR402)

There are no wetlands, waterways, creeks, vernal pools, coastline or riparian habitat on the subject parcels. The majority of the project area is developed, including landscaped areas. The developed area is primarily devoted to senior housing accommodations, though it also includes one public facility (Regalia House) and one undeveloped parcel of 0.50 acres in size. The undeveloped parcel was cleared of improvements in 2005, when the single family residence that had occupied the site was demolished. Currently, the site is covered in non-native grasses, is surrounded by development and has little habitat value.

The project site is composed entirely of developed habitat. No sensitive plant communities or jurisdictional waters were identified within the project site. Source documentation: [15] [16]

WILD AND SCENIC RIVERS ACT (SECTIONS 7 (B), (C))

No wild and scenic rivers are located within Alameda County. Source documentation: [56]

AIR QUALITY (CLEAN AIR ACT, SECTIONS 176(C) AND (D), AND 40CFR6, 51, 93)

On June 2, 2010, the Bay Area Air Quality Management District (BAAQMD) adopted new CEQA significance thresholds for evaluating air quality impacts to projects. The new BAAQMD CEQA Thresholds of Significance establish thresholds of significance for community risk. The State Standards for significance are more restrictive than the federal levels – normally required under NEPA.

The project site is not located near a freeway, Industrial area, dry cleaning facility, or a major railroad yard. The closest arterial highway is Highway 185 located 1,840 feet to the east. The project site is located well outside the recommended setback area for sensitive receptors. The effect of TAC's is *less than significant.*

The project would be not located near air pollution sources of concern and therefore, could not expose new sensitive receptors (senior residents) to substantial pollutant concentrations. The impacts associated with the project are considered *Less than Significant/No Adverse Impact.* Source documentation: [12] [14] [30]

FARMLAND PROTECTION POLICY ACT (7CFR658)

Prime farmland is land best suited for producing food, forage, fiber, and oilseed crops and also available for these uses (the land could be cropland, pastureland, rangeland, forest land, or other land, but not urban built-up land or water). No federally designated Farmlands have been identified within the project area. This project is located in an urban area and will not affect farmlands. Source documentation: [6] [9]

SITING OF HUD-ASSISTED PROJECTS NEAR HAZARDOUS OPERATIONS (24CFRS1C)

The project will not be located near any sites known to contain toxic or radioactive materials, nor is the project located near explosive or thermal source hazards. Source documentation: [31]

AIRPORT CLEAR ZONES AND ACCIDENT POTENTIAL ZONES (24CFR51D)

The project site is not near a public airport or private airstrip nor is it located within an airport plan area. There would be no impact in this regard. There are no major airports within 10 miles of the project site. The nearest minor airports within 5 miles of the site are Camp Parks, 3.49 miles to the north and Livermore Municipal Airport 3.43 miles northeast of the site. No impact zones from any airport or airstrip extend to the site. Source documentation: [33] [34]

COASTAL BARRIER RESOURCES ACT/ COASTAL BARRIER IMPROVEMENT ACT [§58.6(C)]

The Coastal Barrier Resources Act of the United States (CBRA, Public Law 97-348), enacted October 18, 1982, designated various undeveloped coastal barriers, depicted by a set of maps adopted by law, for inclusion in the John H. Chafee Coastal Barrier Resources System (CBRS). Areas so designated were made ineligible for direct or indirect

Federal national security, navigability, and energy exploration. CBRS areas extend along the coasts of the Atlantic Ocean and the Gulf of Mexico, Puerto Rico, the U.S. Virgin Islands, and the Great Lakes, and consist of 857 units.

In 2000, the Service reported to Congress on the inclusion of Pacific Coast coastal barriers in the CBRS. Coastal barriers are defined to include barrier islands, bars, spits, and tombolos, along with associated aquatic habitats, such as adjacent estuaries and wetlands. If some portion of a barrier landform is developed, the remaining undeveloped portion may be included in the CBRS. The Department of the Interior (Department), through the United States Fish and Wildlife Service (Service) is the primary authority in the implementation of this act, and may approve the use of subsidies for such uses as emergency assistance. In 2000, the Service did not recommend the inclusion of Pacific Coast coastal barriers within the CBRS, and Congress has not subsequently amended CBRA to include these barriers.

The proposed project would not affect any resources covered by the Coastal Barrier Resources Act. Source documentation: [57]

CHAPTER 6. [§58.6(D)] - NEPA ALTERNATIVES ANALYSIS

This alternatives analysis is included to fulfill the requirements for an Environmental Assessment under NEPA. Under NEPA, an Environmental Assessment "shall include brief discussions of the need for the proposal, of alternatives as required by Section 102(2)(E) of the environmental impacts of the proposed action and alternatives, and a listing of agencies and persons consulted."[1] Section 102 [42 USC §43321,2(E) states; "study, develop and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternatives uses of available resources." For the proposed Project, the potential alternatives include:

- Alternative A – Alternative Locations
- Alternative B – Alternative Design
- Alternative C – Alternative Site Uses
- No Project Alternative

ALTERNATIVE A – ALTERNATIVE LOCATION

The goal of proposed project is to redevelop existing affordable senior housing into a higher density use to allow additional units. The City of Pleasanton already owns the land. Alternative locations would involve purchase and acquisition expense that do not apply in the proposed project. Alternative locations would present different challenges that this project is intended to solve.

ALTERNATIVE B - ALTERNATIVE DESIGN

The project as proposed (and described in Chapter 3) is a result of community outreach, discussion and agreement among stakeholders. The multistory buildings have been centered in the sites to ease transition to the older, single family residences adjacent to the site. Alternative designs of the site were considered and rejected in favor of the proposed, superior design.

This project is designed to work on this site within the zoning, transportation and other planning constraints that apply specifically to this location. Alternative designs for the project were considered, but the collaborative effort developed the proposed project as the best opportunity for serving the low income senior housing needs of the community.

ALTERNATIVE C – ALTERNATIVE SITE USES

Alternative uses of the site, such as for office, industrial, heavy commercial or warehouse are not within the purview of the applicant as a non-profit housing developer. Alternative uses of the site would entail relocation of the existing residents, contributing to the need for affordable housing for the aging senior population. Further, development of the site as commercial or office would not afford the city the means to address its stated goal to supply affordable senior housing in the area. The current configuration of housing was the best because it was the most cost effective, allows for the most efficient of use of the site and affords the best opportunity for meeting the low income senior housing goals of the City of Pleasanton and Alameda County.

NO ACTION ALTERNATIVE [24 CFR 58.40(e)] *(Discuss the benefits and adverse impacts to the human environment of not implementing the preferred alternative).*

Pleasanton Gardens and Kottinger Place would continue in their current state. The existing combined 90 units of affordable senior housing would continue in its current state. In 2013, the two complexes are aged 40 and 44, respectively. Deferred maintenance and other expenses would continue at their current rate. The residents would remain. The goal for affordable senior housing would continue unmet.

CHAPTER 7. – PREPARER & REFERENCES

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CHAPTER 8. SOURCE DOCUMENTATION:

1. **Association of Bay Area Governments.** *San Francisco Bay Area Housing Needs Plan 2007-2014.* s.l. : ABAG, P.O. Box 2050, Oakland, CA 94604-2050, June 2008. ABAG Catalog Number: P08001PLN.

2. **City of Pleasanton.** *General Plan, Housing Element.* Adopted February 13, 2012, Amended June 5, 2012, Amended October 16, 2012.

3. **Miller, Vern.** *Report Preparer/Site Visit.* s.l. : AEM Consulting, March 18, 2013.

4. **MidPen Housing Corporation.** *Kottinger Place/Pleasanton Gardens Redevelopment.* Undated.

5. **Google.** *Earth.* [Computer Application] s.l. : Google, 2013.

6. **City of Pleasanton.** *General Plan 2005 - 2025.* Adopted July 21, 2009.

7. **AEM Consulting.** *Historic and Cultural Resources Evaluation for Section 106 Review, Kottinger Senior Housing, 240 & 251 Kottinger Drive, 41385 Vineyard Avenue and 4153 Regalia Court, Pleasanton, CA 94566 .* Santa Rosa, CA : s.n., April 2013.

8. **Gardner, Linda M.** *Letter to Dr. Carol Roland-Nawi, State Historic Preservation Officer in RE: Kottinger Senior Housing, 240 & 251 Kottinger Drive, 4138 Vineyard Avenue, and 4153 Regalia Court, Pleasanton, Alameda County, California 94566.* Hayward, CA : Alameda County Community Development Agency, Housing and Community Development Department, April 11, 2013.

9. **United States Department of Agriculture.** *Soil Survey of Alameda County.* s.l. : Soil Conservation Service, May 1991.

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Appendix A – Air Quality

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Air Quality Assessment

Kottinger Place Senior Residential Development

Pleasanton, California

June 6, 2013

Prepared for:
City of Pleasanton
Pleasanton, CA
And Mid Pen Housing

Prepared by:
Vern Miller

AEM Consulting
310 Pacific Heights Drive
Santa Rosa, CA 95409

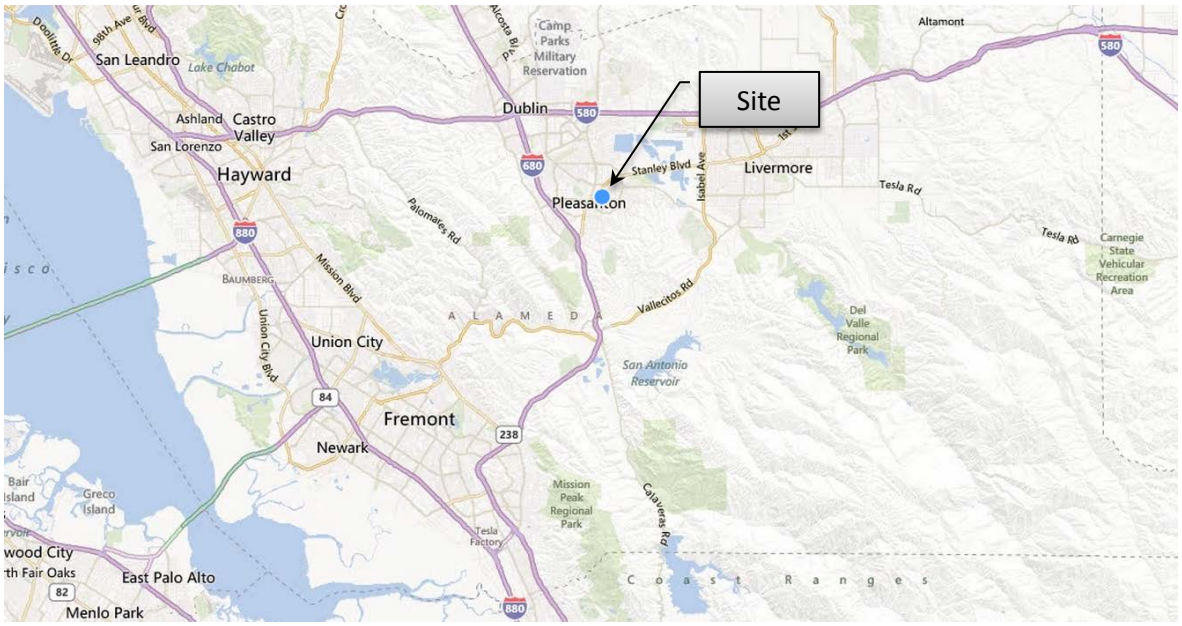
INTRODUCTION

This report presents the results of the environmental air quality evaluation of the Kottinger Place Senior Residential Development project in Pleasanton, California. This report presents an analysis of the potential Air Quality impacts that would be associated with the development of up to 189 residential units for seniors located at 240 Kottinger Drive and 251 Kottinger Drive in the City of Pleasanton. The Air Quality study was completed in accordance with the criteria established by the Bay Area Air Quality District, and is consistent with Accepted Air Quality methods.

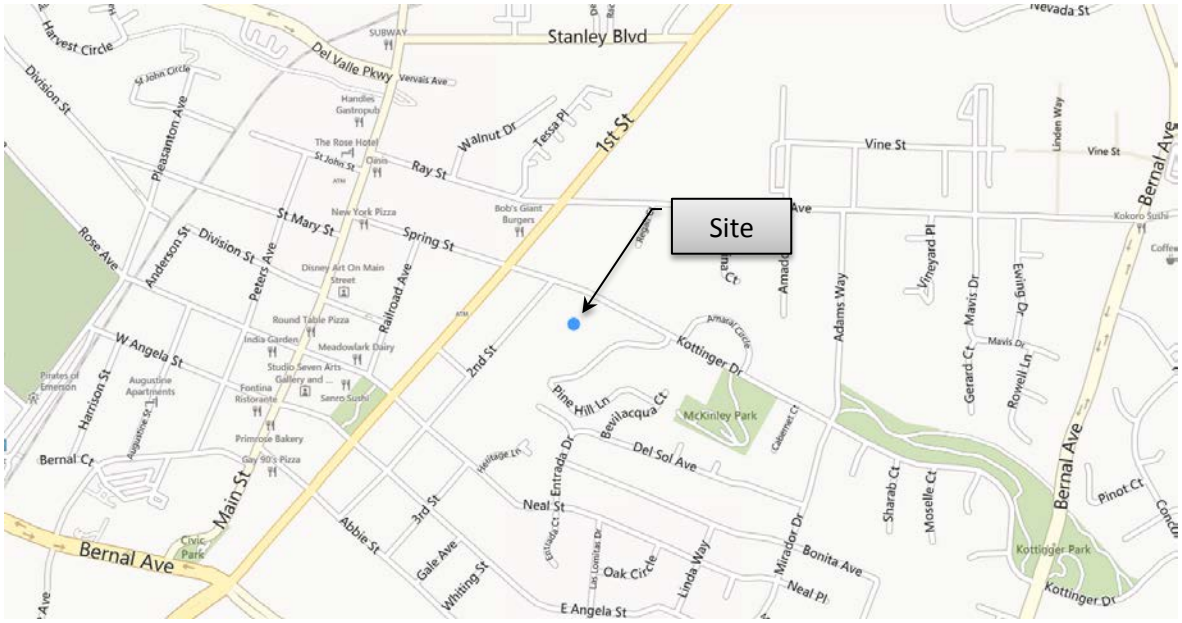
The project as proposed includes the development of up to 189 residential units for seniors on sites that are located at 240 Kottinger Drive (Kottinger Place) and 251 Kottinger Drive (Pleasanton Gardens) in the City of Pleasanton. Currently, the two project sites are occupied by 90 residential units (50 on the Kottinger Place site and 40 on the Pleasanton Gardens site) for seniors. The proposed project would demolish the existing units and build up to 59 new units on the Pleasanton Gardens site and up to 130 units on the Kottinger Place site, for a net increase of 99 senior residential units. As part of the proposed project, the Regalia House site located at 4133 Regalia Court and a vacant parcel located at 418 Vineyard Avenue would be incorporated into the new plan for Kottinger Place. The Kottinger Place project site would be accessed via three access points: two on Vineyard Avenue and one on Kottinger Drive, while the Pleasanton Gardens project site would be accessed via one access point on Kottinger Drive.

Project Location

Kottinger Senior Apartments
251 Kottinger Dr
Pleasanton, CA 94566



MAP 1 REGION



MAP 2 DETAIL

Project Location

Kottinger Senior Apartments
251 Kottinger Dr
Pleasanton, CA 94566

PHOTO 1 AERIAL VIEW ** COURTESY GOOGLE EARTH

SETTING

Overall Regulatory Setting

The Federal Clean Air Act governs air quality in the United States. In addition to being subject to federal requirements, air quality in California is also governed by more stringent regulations under the California Clean Air Act. At the Federal level, the United States Environmental Protection Agency (USEPA) administers the Clean Air Act (CAA). The California Clean Air Act is administered by the California Air Resources Board (CARB) at the State level and by the Air Quality Management Districts at the regional and local levels. The Bay Area Air Quality Management District (BAAQMD) regulates air quality at the regional level, which includes the nine-county Bay Area.

For consistency with local air quality management, the Bay Area Air Quality Management District BAAQMD standards were used to evaluate impacts for several pollutants. For air quality, the analysis considers whether the Proposed Action or alternatives would:

1) Conflict with the Clean Air Act General Conformity Rule;

2) Emit a criteria pollutant or precursor that exceeds local thresholds for construction or operation;

3) Exceed local standards for fugitive dust emissions during construction;

4) Exceed carbon monoxide standards during operation;

5) Expose sensitive receptors to health risks in excess of local thresholds;

6) Exceed local $PM_{2.5}$ standards for new residential development; or

7) Expose a substantial number of people to odor emissions.

The federal Clean Air Act requires each state to identify areas that have ambient air quality in violation of federal standards. States are required to develop, adopt, and implement a state implementation plan (SIP) to achieve, maintain, and enforce federal ambient air quality standards in these nonattainment areas. SIP elements are developed on a pollutant-by-pollutant basis whenever one or more air quality standards are being violated. In California, local and regional air pollution control agencies have primary responsibility for developing SIPs, generally in coordination with local and regional land use and transportation planning agencies. The Bay Area Air Quality Management District (BAAQMD) is the responsible regional air pollution control agency in the San Francisco Bay Area.

An area's compliance with national ambient air quality standards under the Clean Air Act is categorized as nonattainment, attainment (better than national standards), unclassifiable, or attainment/cannot be classified. The unclassified designation includes attainment areas that comply with federal standards, as well as areas for which monitoring data are lacking. Unclassified areas are treated as attainment areas for most regulatory purposes. Simple attainment designations generally are used only for areas that transition from nonattainment status to attainment status.

Areas that have been reclassified from nonattainment to attainment of federal air quality standards are automatically considered maintenance areas, although this designation is seldom noted in status listings. The San Francisco Bay Area is designated as nonattainment for the federal 8-hour ozone standard and the 24-hour fine particulate matter ($PM_{2.5}$) standard. The San Francisco Bay Area is designated as attainment or unclassified for the other national ambient air quality standards.

With respect to the state ambient air quality standards, California classifies areas as attainment, nonattainment, nonattainment-transitional, or unclassified. The San Francisco Bay Area is designated as nonattainment for the state ozone, inhalable particulate matter (PM_{10}) and $PM_{2.5}$ standards and as attainment or unclassified for the other state ambient air quality standards. The predominant regulation that guides assessment of air quality impacts of federal actions is the General Conformity Rule, established under the Clean Air Act (Section 176(c)(4)). The General Conformity Rule ensures that the actions taken by federal agencies in nonattainment and maintenance areas do not interfere with a state's plans to meet national standards for air quality. The project area is located within the San Francisco Bay Area Air Basin, which is designated as a nonattainment area for the federal 8-hour ozone standard and the federal fine particulate matter ($PM_{2.5}$) standard. The air basin is designated as a maintenance area with respect to the federal carbon monoxide (CO) standards.

In keeping with the General Conformity Rule process, this assessment applies the appropriate *de minimis* thresholds of the Rule as they apply to the San Francisco Bay Area Air Basin for ozone precursors, $PM_{2.5}$, and CO. The *de minimis* thresholds for these three pollutants in the San Francisco Bay Area Air Basin are 100 tons per year for each pollutant.

Criteria Air Pollutants & Effect

Air quality studies generally focus on five pollutants that are most commonly measured and regulated: CO, O_3, NO_2, SO_2, and suspended particulate, i.e., PM_{10} and $PM_{2.5}$.

<u>Carbon Monoxide</u>. CO, a colorless and odorless gas, interferes with the transfer of oxygen to the brain. It can cause dizziness and fatigue, and can impair central nervous system functions. CO is emitted almost exclusively from the incomplete combustion of fossil fuels. Automobile exhausts release approximately 70 percent of the CO in the Bay Area. A substantial amount also comes from burning wood in fireplaces and wood stoves. CO is a non-reactive air pollutant that dissipates relatively quickly, so ambient CO concentrations generally follows the spatial and temporal distributions of vehicular traffic. The highest CO concentrations measured in the Bay Area are typically recorded during the winter.

<u>Ozone</u>. O_3, a colorless toxic gas, is the chief component of urban smog. O_3 enters the blood stream and interferes with the transfer of oxygen, depriving sensitive tissues in the heart and brain of oxygen. Although O_3 is not directly emitted, it forms in the atmosphere through a chemical reaction between reactive organic gas (ROG) and nitrogen oxides (NO_X) under sunlight.[1] ROG

[1] *ROG and NO_X are emitted from automobiles and industrial sources.*

and NOx are primarily emitted from automobiles and industrial sources. O_3 is present in relatively high concentrations within the Bay Area, and the damaging effects of photochemical smog are generally related to the concentration of O_3. Highest O_3 concentrations occur during summer and early autumn, on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. This pollutant is addressed at the regional level.

Nitrogen Dioxide. NO_2, a reddish-brown gas, irritates the lungs. It can cause breathing difficulties at high concentrations. Like O_3, NO_2 is not directly emitted, but is formed through a reaction between nitric oxide (NO) and atmospheric oxygen. NO and NO_2 are collectively referred to as nitrogen oxides (NO_X) and are major contributors to O_3 formation. NO_2 also contributes to the formation of PM_{10} (see discussion of PM_{10} below). NO_2 concentrations in the Bay Area are relatively low and do not warrant analysis from land use type projects.

Sulfur Oxides. Sulfur oxides, primarily SO_2, are a product of high-sulfur fuel combustion. The main sources of SO_2 are coal and oil used in power stations, in industries, and for domestic heating. SO_2 is an irritant gas that attacks the throat and lungs. It can cause acute respiratory symptoms and diminished ventilator function in children. SO_2 concentrations have been reduced to levels well below the state and national standards, but further reductions in emissions are needed to attain compliance with standards for PM_{10}, of which SO_2 is a contributor. In the Bay Area, SO_2 is primarily an issue for oil refining.

Suspended Particulate Matter. Particulate matter pollution consists of very small particles suspended in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter also forms when industry and gaseous pollutant undergo chemical reactions in the atmosphere. Respirable particulate matter (PM_{10}) and fine particulate matter ($PM_{2.5}$) represent fractions of particulate matter. PM_{10} refers to particulate matter less than 10 microns in diameter and $PM_{2.5}$ refers to particulate matter that is $PM_{2.5}$ microns or less in diameter. Major sources of $PM_{2.5}$ results primarily from diesel fuel combustion (from motor vehicles, power generation, and industrial facilities), residential fireplaces, and wood stoves. PM_{10} include all $PM_{2.5}$ sources as well as emissions from dust generated by construction, landfills, and agriculture; wildfires and brush/waste burning, industrial sources, windblown dust from open lands, and atmospheric chemical and photochemical reactions. PM_{10} and $PM_{2.5}$ pose a greater health risk than larger-size particles, because these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract increasing the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Whereas, larger particles tend to collect in the upper portion of the respiratory system, $PM_{2.5}$ are so tiny that they can penetrate deeper into the lungs and damage lung tissues. Suspended particulates also damage and discolor surfaces on which they settle, as well as produce haze and reduce regional visibility.

Toxic Air Contaminants

Toxic Air Contaminants (TAC) are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer) and include, but are not limited to, the criteria air

pollutants listed above. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., benzene near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, state, and federal level.

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about two-thirds of the cancer risk from TACs (based on the statewide average). According to the CARB, diesel exhaust is a complex mixture of gases, vapors and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the state's Proposition 65 or under the federal Hazardous Air Pollutants programs.

CARB reports that recent air pollution studies have shown an association that diesel exhaust and other cancer-causing toxic air contaminants emitted from vehicles are responsible for much of the overall cancer risk from TACs in California. DPM emitted by diesel-fueled engines was found to comprise much of that risk. DPM can be distributed over large regions, thus leading to widespread public exposure. Diesel engines emit particulate matter at a rate about 20 times greater than comparable gasoline engines. The vast majority of diesel exhaust particles (over 90 percent) consist of $PM_{2.5}$, which are particles that can be inhaled deep into the lung. Like other particles of this size, a portion will eventually become trapped within the lung possibly leading to adverse health effects. While the gaseous portion of diesel exhaust also contains TACs, CARB's

1998 action was specific to DPM, which accounts for much of the cancer-causing potential from diesel exhaust. California has adopted a comprehensive diesel risk reduction program to reduce DPM emissions 85 percent by 2020. The U.S. EPA and CARB adopted low sulfur diesel fuel standards in 2006 that reduce diesel particulate matter substantially.

CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of DPM. Several of these regulatory programs affect medium and heavy duty diesel trucks that represent the bulk of DPM emissions from California highways. These regulations include the solid waste collection vehicle (SWCV) rule, in-use public and utility fleets, and the heavy-duty diesel truck and bus regulations.

In December 2008 the CARB approved a new regulation to reduce emissions of DPM and nitrogen oxides from existing on-road heavy-duty diesel fueled vehicles[2]. The regulation requires affected vehicles to meet specific performance requirements between 2011 and 2023, with all affected diesel vehicles required to have 2010 model-year engines or equivalent by 2023. These requirements are phased in over the compliance period and depend on the model year of the vehicle. (Bay Area Air Quality Management District (BAAQMD), June 2010)

2 *http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm*

Buffer Zones

The BAAQMD recommends that general plans include buffer zones to separate sensitive receptors from sources of air toxic contaminants and odors. In June 2010, CARB released the final version of the Air Quality and Land Use Handbook (Bay Area Air Quality Management District, June 10, 2010), which is intended to encourage local land use agencies to consider the risks from air pollution prior to making decisions that approve the siting of new sensitive receptors (e.g., schools, homes or daycare centers) near sources of air pollution. Unlike industrial or stationary sources of air pollution, siting of new sensitive receptors does not require air quality permits, but could create air quality problems. The primary purpose of the handbook is to highlight the potential health impacts associated with proximity to common air pollution sources, so that those issues are considered in the planning process. CARB makes recommendations regarding the siting of new sensitive land uses near freeways, truck distribution centers, dry cleaners, gasoline dispensing stations, and other air pollution sources. These "advisory" recommendations include setbacks of 500 feet between new residences and freeways. The setbacks are based primarily on modeling information and are not reflective of site-specific conditions in Pleasanton. Siting of new sensitive land uses within these recommendation distances may be possible, but only after site-specific studies are conducted to identify the actual health risks. CARB acknowledges that land use agencies have to balance other siting considerations such as housing and transportation needs, economic development priorities and other quality of life issues.

The Bay Area Air Quality Management District (BAAQMD) Clean Air Plan is the regional air quality management plan for the San Francisco Bay Area (Bay Area Air Quality Management District, December 20, 2000). The Clean Air Plan accounts for projections of population growth provided by the Association of Bay Area Governments and vehicle miles traveled provided by the Metropolitan Transportation Commission, and it identifies strategies to bring regional emissions into compliance with federal and State air quality standards.

The project site is not located near a freeway, Industrial area, dry cleaning facility, or a major railroad yard. The closest arterial highway is Highway 185 located 1,840 feet to the east. The project site is located outside the setback area for sensitive receptors.

BAAQMD Thresholds of Significance

Bay Area Air Quality Management District (BAAQMD or District) California Environmental Quality Act (CEQA) Guidelines is to assist lead agencies in evaluating air quality impacts of projects and plans proposed in the San Francisco Bay Area Air Basin (SFBAAB). The Guidelines provides BAAQMD-recommended procedures for evaluating potential air quality impacts during the environmental review process consistent with CEQA requirements.

The SFBAAB is currently designated as a nonattainment area for state and national ozone standards and national particulate matter ambient air quality standards. SFBAAB's nonattainment status is attributed to the region's development history. Past, present and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

Exposure of Residents to Air Pollution

Mobile Sources (Roadways)

For purposes of risk and hazards for new sources and receptors for individual project, the zone of influence is a 1,000-foot radius from property line of the source or receptor. This new threshold is effective May 1, 2011.

Major roadways are defined by the BAAQMD as having at least 10,000 average annual daily traffic (AADT). Roadway traffic count data is available from the local congestion management authority

The only Roadway having at least 10,000 average daily traffic within I, 000 feet of the project site is First Street located 450 feet to the west of the nearest building. The BAAQMD recently updated the impacts from highways throughout the Bay Area. The interactive tool allows users to use different segments of the highways to view estimated risk and hazard impacts that represent the average annual daily traffic (AADT) count, fleet mix, and other modeling parameters specific to that segment of the highway. The estimated risk and hazard impacts are also modeled at two different heights, 6 ft. and 20 ft., allowing users to estimate the risk when receptors are located at the ground level vs. the second floor of a building. This modeling uses the 20 foot height.

The initial Highway Screening shows a cancer risk of 1.53 in a million. The Threshold of Significance is less than 10 in a million. The exposure of new residents to mobile sources of $PM_{2.5}$ and other Toxic Air Contaminates is *Less than Significant*

	Average Daily Traffic	**Nearest Distance**	**PM2.5**	**Segment Factor**	**Cancer Risk**
First Street	19,800	480 '	0.039	0.32	1.53

Thresholds of Significance - Mobile Sources Cancer and Non-Cancer (Chronic and Acute) Hazard Indices			
Description	Screening Value	Thresholds	Exceeds Threshold?
$PM_{2.5}$ Concentration	0.039 ug/m3	0.3 ug/m^3	No
Cancer Risk	1.53 in a million	10 in a million	No
Chronic Non-cancer Hazard Index	0.000	1	No
Acute Non-cancer Hazard Index	0.000	1	No

Stationary Sources

Using the screening tool for Alameda County Permitted Sources updated to 2011, provided by applying the KMZ data file from the BAAQMD and adding to Google Earth we find the BAAQMD recognizes only one stationary permitted source within 1,000 feet of the subject property.

Pacific Bell located at 120 Ray Street.

13507

Permitted_sources_risk_and_hazard_address_schema:FID	6238
Permitted_sources_risk_and_hazard_address_schema:Plant_Numb	13507
Permitted_sources_risk_and_hazard_address_schema:Gas_Dispen	0
Permitted_sources_risk_and_hazard_address_schema:FACILITY_N	Pacific Bell
Permitted_sources_risk_and_hazard_address_schema:Source_Typ	Emergency Generator
Permitted_sources_risk_and_hazard_address_schema:STREET	120 Ray Street
Permitted_sources_risk_and_hazard_address_schema:CITY	Pleasanton, CA 94566
Permitted_sources_risk_and_hazard_address_schema:UTM_E	599557
Permitted_sources_risk_and_hazard_address_schema:UTM_N	4169029
Permitted_sources_risk_and_hazard_address_schema:Cancer_Ris	51.5
Permitted_sources_risk_and_hazard_address_schema:Chronic_Ha	0.0183
Permitted_sources_risk_and_hazard_address_schema:Acute_Haza	0
Permitted_sources_risk_and_hazard_address_schema:PM2_5	0.0917

Initial screening using the BAAQMD dataset shows the Pacific Bell emergency generator has a cancer exposure risk of 51.5 which exceeds the threshold limits of 10:1,000,000. The Pacific Bell building is located approximately 730 to the west of the nearest exposed building. The BAAQMD uses a Diesel Internal Combustion (IC) Engine Distance Multiplier Tool. This distance multiplier tool refines the screening values for cancer risk and $PM_{2.5}$ concentrations found in the District's Stationary Source Screening Analysis Tool for permitted facilities which contain only diesel IC engines, to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

Distance (meters)	Distance (feet)	Distance Adjustment Multiplier	Enter Cancer Risk Estimate	Adjusted Cancer Risk Estimate	Enter $PM_{2.5}$ Concentration	Adjusted $PM_{2.5}$ Concentration
220	722	0.07	51.5	3.605	0.0917	0.006419

Applying the distance adjustment Shows an Adjusted Cancer Risk Estimate of 3.605 which falls below the 10:1,000,000 threshold. Furthermore the Adjusted $PM_{2.5}$ Concentration is 0.006419 which falls below 0.3 ug/m3.

The exposure of new residents to stationary sources of $PM_{2.5}$ and other Toxic Air Contaminates is *Less than Significant*

Method

CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects. The model quantifies direct emissions from construction and operations (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. The model incorporates Pavley standards and Low Carbon Fuel standards into the mobile source emission factors. Further, the model identifies mitigation measures to reduce criteria pollutant and GHG emissions along with calculating the benefits achieved from measures chosen by the user. The GHG mitigation measures were recently developed and adopted by the California Air Pollution Control Officers Association (CAPCOA).

CalEEMod Version 2011.1.1 was used to analyze the potential emissions resulting from project operation and construction. CalEEMod is designed to estimate air emissions from land use development projects. CalEEMod allows for estimations of construction emissions. CalEEMod also allows the user to select mitigation measures for construction emissions. The CalEEMod results are attached as Appendix A. The model uses data supplied by the CalEEMod entry. In places where incomplete dataset was available (for example there is no information readily available on the type of heavy construction excavators to be employed) the model defaults were used. The results of the modeling appear in Appendix A.

Results - Operations

Operational Criteria Air Pollutant and Precursor Emissions Analysis								
Emissions (lb/day or tpy)*								
Source Emissions	**ROG** (unmitigated)	**ROG** (mitigated)	**NOX** (unmitigated)	**NOX** (mitigated)	**PM10** (unmitigated)	**PM10** (mitigated)	**PM2.5** (unmitigated)	**PM2.5** (mitigated)
Area Sources	A=1.39	A=1.39	A=..02	A=.02	A=..01	A=0.01	A=..01	A=0.01
Energy	B= .02	B= 0.01	B= 0.13	B= 0.10	B= 0.01	B= 0.01	B= 0.01	B= 0.01
Mobile Sources	C=.32	C=.30	C=.074	C=0.70	C=.029	C=0.26	C=0.03	C=0.03
Total Project Emissions	1.73	1.70	.89	0.82	.31	0.28	0.05	.05
BAAQMD Threshold	54 lb/day or 10 tpy	54 lb/day or 10 tpy		82 lb/day or 15 tpy		54 lb/day or 10 tpy		
Significance	**No**	**No**	**No**	**No**	**No**	**No**	**No**	
* Notes: lb/day = pounds per day; NO_X = oxides of nitrogen; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM_{10} = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ROG = reactive organic gases; tpy = tons per year.								

The proposed project is for the older adult population. The project is anticipated to generate an average of 295 net new trips on a daily basis, of which 20 trips would occur during the morning peak hour and 24 trips during the evening peak hour. The trips generated by the additional units are anticipated to be less with the availability of transit at the project.

Projects of this size do not normally generate operational emissions in sufficient quantity to exceed established thresholds. With the small number of additional vehicle trips generated coupled with the availability of transit, traffic generated by the project would have a less-than-significant impact to local and regional air quality operational emissions. Therefore the following analysis focuses on construction impacts only.

Construction Emissions

Although the project-generated traffic would not result in a significant long-term impact on local or regional air quality, short-term construction impacts could represent an adverse impact without mitigation. Sources of air emissions and dust include activities such as grading, vehicle travel on paved and unpaved surfaces, and vehicles and equipment exhaust.

The project's construction activities are not expected to substantially change existing air quality standards or contribute to any existing or projected air quality violation. With the implementation of standard construction practices required by the City of Pleasanton, and any mitigation measures that may be required by the BAAQMD and contained in the conditions of approval, potential air quality related impacts would be consistent with the City's LCP/LUP and would be reduced to a less than significant level According to the BAAQMD CEQA Guidelines, a project that would not individually have a significant air quality impact may have significant cumulative impacts. The determination as to whether a project would have a significant cumulative impact is based on the evaluation of the consistency of the project with the local General Plan and the consistency of the General Plan with the Bay Area Clean Air Plan (CAP). The project, with mitigation measures, would be consistent with the City's LCP/LUP. The LCP/LUP is consistent with the CAP, therefore, the project would pose no significant cumulative air quality impacts.

Sources of air emissions and dust that could result from the construction of the project include activities such as grading, vehicle travel on paved and unpaved surfaces, and vehicles and equipment exhaust.

Emissions Due To Construction Activity

Construction of the project would result in the temporary generation of NOx and PM_{10} emissions. Short-term air quality impacts are mostly due to dust (PM_{10}) generated by construction and development activities, and emissions from equipment and vehicle engines (NOx) operated during these activities. Dust generation is dependent on soil type and soil moisture, as well as the amount of total acreage actually involved in clearing, grubbing and grading activities. Clearing and earth-moving activities comprise the major source of construction dust generation, but traffic and general disturbance of the soil also contribute to the problem. Sand, lime or other fine particulate materials may be used during construction, and stored on-site. If not stored properly, such materials could become airborne during periods of high winds. The effects of construction activities include increased dust fall and locally elevated levels of suspended particulates. PM_{10} is considered unhealthy because the particles are small enough to inhale and damage lung tissue, which can lead to respiratory problems. PM_{10} emissions during project construction can be reduced through compliance with institutional requirements for dust abatement and erosion control. See Appendix A for CAL EE MOD Construction related mitigated and Unmitigated data.

Carbon Monoxide Hotspots

The BAAQMD CEQA Air Quality Guidelines indicate that project analyses should follow the University of California Davis Transportation Project-Level Carbon Monoxide Protocol (CO Protocol). According to the CO Protocol, intersections with Level of Service (LOS) E or F require detailed analysis. A project contributing to CO concentrations exceeding the California Ambient Air Quality Standard of 9 parts per million (ppm) averaged over 8 hours and 20 ppm for 1 hour would be considered to have a significant impact.

Under Existing Conditions, all study intersections are operating at level of service (LOS) D or better during weekday peak hours, and LOS C or better during Saturday peak hours. These existing service levels meet current City of Pleasanton LOS standards.

Under Existing plus Approved Projects Conditions, with the addition of traffic for nearby City-approved projects, all study intersections are expected to continue operating at an acceptable LOS D or better during all peak hours, with minor increases in average delay.

Under Existing plus Approved Projects plus Proposed Project Conditions, all study intersections are expected to continue operating acceptably at LOS D or better during all peak hours, just as under Existing plus Approved Projects Conditions, with minor changes in average vehicle delay. Therefore, no mitigations due to project traffic are necessary at the study intersections.

No CO hotspots are anticipated as a result of traffic generated emissions by the proposed project in combination with existing or cumulative traffic. Therefore, the mobile-related emissions from the project are not anticipated to contribute substantially to an existing or projected air quality violation and would not expose sensitive receptors to substantial pollutant concentrations. Impacts would be *less than significant.*

Odors

The construction of the project would not be expected to create a source of any objectionable odors.

Greenhouse Gas Emissions

Similar to regulated air pollutants, GHG emissions and global climate change also represent cumulative impacts. GHG emissions contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change. Climate change impacts may include an increase in extreme heat days, higher concentrations of air pollutants, sea level rise, impacts to water supply and water quality, public health impacts, impacts to ecosystems, impacts to agriculture, and other environmental impacts. No single project could generate enough GHG emissions to noticeably change the global average temperature. The combination of GHG emissions from past, present, and future projects contribute substantially to the phenomenon of global climate change and its associated environmental impacts.

Greenhouse Gases – Thresholds of Significance

The Thresholds of Significance for operational-related GHG emissions are: For land use development projects, the threshold is compliance with a qualified GHG Reduction Strategy; or annual emissions less than 1,100 metric tons per year (MT/yr) of CO2e; or 4.6 MT CO2e/SP/yr (residents + employees). Land use development projects include residential, commercial, industrial, and public land uses and facilities. For stationary-source projects, the threshold is 10,000 metric tons per year (MT/yr) of CO2e. Stationary-source projects include land uses that would accommodate processes and equipment that emit GHG emissions and would require an Air District permit to operate. If annual emissions of operational-related GHGs exceed these levels, the proposed project would result in a cumulatively considerable contribution of GHG emissions and a cumulatively significant impact to global climate change. (Bay Area Air Quality Management District, June 2, 2010)

Greenhouse Gases – Analysis

Mitigated	CO2 (Total all sources) (metric tpy)	CH4 (metric tpy)	N2O (metric tpy)	CO2e (metric tpy)
Area Source:	2.32	0.00	0.00	2.37
Energy:	271.99	0.01	0.00	273.67
Mobile	257.51	0.01	0.00	257.78
Water & Wastewater:	21.94	0.30	0.01	30.70
Solid Waste:	8.82	.52	0.00	19.78
Total:	562.58	0.84	0.01	584.3
BAAQMD Threshold				1,100 (MT CO2e per year)
Significance				No

Greenhouse Gasses - Results

The project would incrementally generate greenhouse gas emissions; however, these emissions would not have a significant impact on the environment. The project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. Impacts would be *less than significant.*

Conclusions

Operational Criteria Air Pollutant and Precursor Emissions Analysis

There would be an incremental increase in Operational Air Pollutant Precursor Emissions. However the amount does not rise to the level of significance per the BAAQD CEQA Guidelines. The effect is less than Significant

Construction Emissions

Construction of the project would result in the temporary generation of NOx and PM_{10} emissions. Short-term air quality impacts are mostly due to dust (PM_{10}) generated by construction and development activities, and emissions from equipment and vehicle engines (NOx) operated during these activities. Dust generation is dependent on soil type and soil moisture, as well as the amount of total acreage actually involved in clearing, grubbing and grading activities. Clearing and earth-moving activities comprise the major source of construction dust generation, but traffic and general disturbance of the soil also contribute to the problem. Sand, lime or other fine particulate materials may be used during construction, and stored on-site. If not stored properly, such materials could become airborne during periods of high winds. The effects of construction activities include increased dust fall and locally elevated levels of suspended particulates. PM_{10} is considered unhealthy because the particles are small enough to inhale and damage lung tissue, which can lead to respiratory problems. PM_{10} emissions during project construction can be reduced through compliance with institutional requirements for dust abatement and erosion control.

Carbon Monoxide Hotspots

No CO hotspots are anticipated as a result of traffic generated emissions by the proposed project in combination with existing or cumulative traffic. Therefore, the mobile-related emissions from the project are not anticipated to contribute substantially to an existing or projected air quality violation and would not expose sensitive receptors to substantial pollutant concentrations. Impacts would be *less than significant.*

Greenhouse Gas Emissions

The project would incrementally generate greenhouse gas emissions; however, these emissions would not have a significant impact on the environment. The project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. Impacts would be *less than significant.*

Appendix A – CalEE MoD Dataset: Combined Operational and Construction related Annual and Greenhouse Gas Emissions

Kottinger Place and Pleasanton Gardens

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Parking Lot	152	Space
Apartments Low Rise	83	Dwelling Unit
Apartments Mid Rise	106	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Pacific Gas & Electric Company
Climate Zone	5	**Precipitation Freq (Days)**	63		

1.3 User Entered Comments

Project Characteristics -

Land Use - Based on actual building sq footage Lot ac estimated. Population default

Construction Phase - Estimates by default Construction start dates by MidPenn

Vehicle Trips - Trip rates from Kottinger Drive Senior Housing Project Traffic Impact Analysis to the City of Pleasanton from MidPen Housing Corporation - W Trans - June 5, 2013

Energy Use - Estimates based on historic data for Retirement residential communities

Land Use Change -

Sequestration -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Woodstoves - Units will not have wood stoves or fireplaces

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					
2011	1.07	6.80	5.52	0.01	0.39	0.42	0.81	0.10	0.42	0.51	0.00	795.75	795.75	0.09	0.00	797.57
2012	3.80	0.83	0.67	0.00	0.03	0.06	0.09	0.00	0.06	0.06	0.00	94.39	94.39	0.01	0.00	94.63
Total	**4.87**	**7.63**	**6.19**	**0.01**	**0.42**	**0.48**	**0.90**	**0.10**	**0.48**	**0.57**	**0.00**	**890.14**	**890.14**	**0.10**	**0.00**	**892.20**

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					
2011	1.07	6.80	5.52	0.01	0.30	0.42	0.72	0.05	0.42	0.47	0.00	795.75	795.75	0.09	0.00	797.57
2012	3.80	0.83	0.67	0.00	0.03	0.06	0.09	0.00	0.06	0.06	0.00	94.39	94.39	0.01	0.00	94.63
Total	**4.87**	**7.63**	**6.19**	**0.01**	**0.33**	**0.48**	**0.81**	**0.05**	**0.48**	**0.53**	**0.00**	**890.14**	**890.14**	**0.10**	**0.00**	**892.20**

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	1.39	0.02	1.45	0.00		0.00	0.01		0.00	0.01	0.00	2.32	2.32	0.00	0.00	2.37
Energy	0.02	0.13	0.06	0.00		0.00	0.01		0.00	0.01	0.00	347.19	347.19	0.01	0.01	349.34
Mobile	0.32	0.74	2.70	0.00	0.27	0.02	0.29	0.01	0.02	0.03	0.00	282.63	282.63	0.01	0.00	282.92
Waste						0.00	0.00		0.00	0.00	17.65	0.00	17.65	1.04	0.00	39.55
Water						0.00	0.00		0.00	0.00	0.00	27.43	27.43	0.38	0.01	38.38
Total	**1.73**	**0.89**	**4.21**	**0.00**	**0.27**	**0.02**	**0.31**	**0.01**	**0.02**	**0.05**	**17.65**	**659.57**	**677.22**	**1.44**	**0.02**	**712.56**

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	1.39	0.02	1.45	0.00		0.00	0.01		0.00	0.01	0.00	2.32	2.32	0.00	0.00	2.37
Energy	0.01	0.10	0.04	0.00		0.00	0.01		0.00	0.01	0.00	271.99	271.99	0.01	0.00	273.67
Mobile	0.30	0.70	2.57	0.00	0.24	0.02	0.26	0.01	0.02	0.03	0.00	257.51	257.51	0.01	0.00	257.78
Waste						0.00	0.00		0.00	0.00	8.82	0.00	8.82	0.52	0.00	19.78
Water						0.00	0.00		0.00	0.00	0.00	21.94	21.94	0.30	0.01	30.70
Total	**1.70**	**0.82**	**4.06**	**0.00**	**0.24**	**0.02**	**0.28**	**0.01**	**0.02**	**0.05**	**8.82**	**553.76**	**562.58**	**0.84**	**0.01**	**584.30**

2.3 Vegetation

Vegetation

	ROG	NOx	CO	SO2	CO2e
Category	tons				MT
Vegetation Land Change					0.00
Total					**0.00**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2011

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	0.10	0.80	0.46	0.00		0.04	0.04		0.04	0.04	0.00	68.12	68.12	0.01	0.00	68.29
Total	**0.10**	**0.80**	**0.46**	**0.00**		**0.04**	**0.04**		**0.04**	**0.04**	**0.00**	**68.12**	**68.12**	**0.01**	**0.00**	**68.29**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56	1.56	0.00	0.00	1.56
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.56**	**1.56**	**0.00**	**0.00**	**1.56**

3.2 Demolition - 2011

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	0.10	0.80	0.46	0.00		0.04	0.04		0.04	0.04	0.00	68.12	68.12	0.01	0.00	68.29
Total	**0.10**	**0.80**	**0.46**	**0.00**		**0.04**	**0.04**		**0.04**	**0.04**	**0.00**	**68.12**	**68.12**	**0.01**	**0.00**	**68.29**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56	1.56	0.00	0.00	1.56
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.56**	**1.56**	**0.00**	**0.00**	**1.56**

3.3 Site Preparation - 2011

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					0.09	0.00	0.09	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.05	0.45	0.25	0.00		0.02	0.02		0.02	0.02	0.00	36.27	36.27	0.00	0.00	36.36
Total	**0.05**	**0.45**	**0.25**	**0.00**	**0.09**	**0.02**	**0.11**	**0.05**	**0.02**	**0.07**	**0.00**	**36.27**	**36.27**	**0.00**	**0.00**	**36.36**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94	0.94	0.00	0.00	0.94
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.94**	**0.94**	**0.00**	**0.00**	**0.94**

3.3 Site Preparation - 2011

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					0.04	0.00	0.04	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.05	0.45	0.25	0.00		0.02	0.02		0.02	0.02	0.00	36.27	36.27	0.00	0.00	36.36
Total	**0.05**	**0.45**	**0.25**	**0.00**	**0.04**	**0.02**	**0.06**	**0.02**	**0.02**	**0.04**	**0.00**	**36.27**	**36.27**	**0.00**	**0.00**	**36.36**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94	0.94	0.00	0.00	0.94
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.94**	**0.94**	**0.00**	**0.00**	**0.94**

3.4 Grading - 2011

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					0.07	0.00	0.07	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.07	0.55	0.33	0.00		0.03	0.03		0.03	0.03	0.00	47.52	47.52	0.01	0.00	47.65
Total	**0.07**	**0.55**	**0.33**	**0.00**	**0.07**	**0.03**	**0.10**	**0.03**	**0.03**	**0.06**	**0.00**	**47.52**	**47.52**	**0.01**	**0.00**	**47.65**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56	1.56	0.00	0.00	1.56
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.56**	**1.56**	**0.00**	**0.00**	**1.56**

3.4 Grading - 2011

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					0.03	0.00	0.03	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.07	0.55	0.33	0.00		0.03	0.03		0.03	0.03	0.00	47.52	47.52	0.01	0.00	47.65
Total	**0.07**	**0.55**	**0.33**	**0.00**	**0.03**	**0.03**	**0.06**	**0.02**	**0.03**	**0.05**	**0.00**	**47.52**	**47.52**	**0.01**	**0.00**	**47.65**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56	1.56	0.00	0.00	1.56
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.56**	**1.56**	**0.00**	**0.00**	**1.56**

3.5 Building Construction - 2011

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	0.64	4.22	2.52	0.00		0.29	0.29		0.29	0.29	0.00	384.78	384.78	0.05	0.00	385.88
Total	**0.64**	**4.22**	**2.52**	**0.00**		**0.29**	**0.29**		**0.29**	**0.29**	**0.00**	**384.78**	**384.78**	**0.05**	**0.00**	**385.88**

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	0.00	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
Vendor	0.05	0.61	0.34	0.00	0.02	0.02	0.04	0.00	0.02	0.02	0.00	77.82	77.82	0.00	0.00	77.86
Worker	0.15	0.16	1.59	0.00	0.20	0.01	0.21	0.01	0.01	0.02	0.00	177.18	177.18	0.01	0.00	177.46
Total	**0.20**	**0.77**	**1.93**	**0.00**	**0.22**	**0.03**	**0.25**	**0.01**	**0.03**	**0.04**	**0.00**	**255.00**	**255.00**	**0.01**	**0.00**	**255.32**

3.5 Building Construction - 2011

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	0.64	4.22	2.52	0.00		0.29	0.29		0.29	0.29	0.00	384.78	384.78	0.05	0.00	385.88
Total	**0.64**	**4.22**	**2.52**	**0.00**		**0.29**	**0.29**		**0.29**	**0.29**	**0.00**	**384.78**	**384.78**	**0.05**	**0.00**	**385.88**

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	0.00	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
Vendor	0.05	0.61	0.34	0.00	0.02	0.02	0.04	0.00	0.02	0.02	0.00	77.82	77.82	0.00	0.00	77.86
Worker	0.15	0.16	1.59	0.00	0.20	0.01	0.21	0.01	0.01	0.02	0.00	177.18	177.18	0.01	0.00	177.46
Total	**0.20**	**0.77**	**1.93**	**0.00**	**0.22**	**0.03**	**0.25**	**0.01**	**0.03**	**0.04**	**0.00**	**255.00**	**255.00**	**0.01**	**0.00**	**255.32**

3.5 Building Construction - 2012

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	0.06	0.37	0.24	0.00		0.03	0.03		0.03	0.03	0.00	36.65	36.65	0.00	0.00	36.74
Total	**0.06**	**0.37**	**0.24**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**36.65**	**36.65**	**0.00**	**0.00**	**36.74**

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	0.00	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
Vendor	0.00	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.42	7.42	0.00	0.00	7.42
Worker	0.01	0.01	0.14	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	16.52	16.52	0.00	0.00	16.54
Total	**0.01**	**0.06**	**0.17**	**0.00**	**0.02**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**23.94**	**23.94**	**0.00**	**0.00**	**23.96**

3.5 Building Construction - 2012

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	0.06	0.37	0.24	0.00		0.03	0.03		0.03	0.03	0.00	36.65	36.65	0.00	0.00	36.74
Total	**0.06**	**0.37**	**0.24**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**36.65**	**36.65**	**0.00**	**0.00**	**36.74**

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	0.00	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
Vendor	0.00	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.42	7.42	0.00	0.00	7.42
Worker	0.01	0.01	0.14	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	16.52	16.52	0.00	0.00	16.54
Total	**0.01**	**0.06**	**0.17**	**0.00**	**0.02**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**23.94**	**23.94**	**0.00**	**0.00**	**23.96**

3.6 Paving - 2012

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	0.06	0.36	0.21	0.00		0.03	0.03		0.03	0.03	0.00	26.46	26.46	0.00	0.00	26.56
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.06**	**0.36**	**0.21**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**26.46**	**26.46**	**0.00**	**0.00**	**26.56**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.53	1.53	0.00	0.00	1.53
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.53**	**1.53**	**0.00**	**0.00**	**1.53**

3.6 Paving - 2012

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	0.06	0.36	0.21	0.00		0.03	0.03		0.03	0.03	0.00	26.46	26.46	0.00	0.00	26.56
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.06**	**0.36**	**0.21**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**26.46**	**26.46**	**0.00**	**0.00**	**26.56**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.53	1.53	0.00	0.00	1.53
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.53**	**1.53**	**0.00**	**0.00**	**1.53**

3.7 Architectural Coating - 2012

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	3.66					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.03	0.02	0.00		0.00	0.00		0.00	0.00	0.00	2.55	2.55	0.00	0.00	2.56
Total	**3.67**	**0.03**	**0.02**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**2.55**	**2.55**	**0.00**	**0.00**	**2.56**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.26	3.26	0.00	0.00	3.27
Total	**0.00**	**0.00**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.26**	**3.26**	**0.00**	**0.00**	**3.27**

3.7 Architectural Coating - 2012

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	3.66					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.03	0.02	0.00		0.00	0.00		0.00	0.00	0.00	2.55	2.55	0.00	0.00	2.56
Total	**3.67**	**0.03**	**0.02**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**2.55**	**2.55**	**0.00**	**0.00**	**2.56**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.26	3.26	0.00	0.00	3.27
Total	**0.00**	**0.00**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.26**	**3.26**	**0.00**	**0.00**	**3.27**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Integrate Below Market Rate Housing

Provide Traffic Calming Measures

	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	0.30	0.70	2.57	0.00	0.24	0.02	0.26	0.01	0.02	0.03	0.00	257.51	257.51	0.01	0.00	257.78
Unmitigated	0.32	0.74	2.70	0.00	0.27	0.02	0.29	0.01	0.02	0.03	0.00	282.63	282.63	0.01	0.00	282.92
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	249.00	249.00	249.00	241,590	218,035
Apartments Mid Rise	318.00	318.00	318.00	308,537	278,455
Parking Lot	0.00	0.00	0.00		
Total	567.00	567.00	567.00	550,127	496,490

4.3 Trip Type Information

	Miles			Trip %		
Land Use	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
Apartments Low Rise	3.00	3.00	3.00	26.10	29.10	44.80
Apartments Mid Rise	3.00	3.00	3.00	26.10	29.10	44.80
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Kilowatt Hours of Renewable Electricity Generated

Percent of Electricity Use Generated with Renewable 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						0.00	0.00		0.00	0.00	0.00	152.68	152.68	0.01	0.00	153.64
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	195.94	195.94	0.01	0.00	197.17
NaturalGas Mitigated	0.01	0.10	0.04	0.00		0.00	0.01		0.00	0.01	0.00	119.31	119.31	0.00	0.00	120.03
NaturalGas Unmitigated	0.02	0.13	0.06	0.00		0.00	0.01		0.00	0.01	0.00	151.25	151.25	0.00	0.00	152.17
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
Apartments Low Rise	1.63609e+006	0.01	0.08	0.03	0.00		0.00	0.01		0.00	0.01	0.00	87.31	87.31	0.00	0.00	87.84
Apartments Mid Rise	1.19817e+006	0.01	0.06	0.02	0.00		0.00	0.00		0.00	0.00	0.00	63.94	63.94	0.00	0.00	64.33
Parking Lot	0	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
Total		**0.02**	**0.14**	**0.05**	**0.00**		**0.00**	**0.01**		**0.00**	**0.01**	**0.00**	**151.25**	**151.25**	**0.00**	**0.00**	**152.17**

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	tons/yr										MT/yr					
Apartments Low Rise	1.28462e+006	0.01	0.06	0.03	0.00		0.00	0.00		0.00	0.00	0.00	68.55	68.55	0.00	0.00	68.97
Apartments Mid Rise	951081	0.01	0.04	0.02	0.00		0.00	0.00		0.00	0.00	0.00	50.75	50.75	0.00	0.00	51.06
Parking Lot	0	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
Total		**0.02**	**0.10**	**0.05**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**119.30**	**119.30**	**0.00**	**0.00**	**120.03**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments Low Rise	293134					85.28	0.00	0.00	85.81
Apartments Mid Rise	380413					110.67	0.01	0.00	111.36
Parking Lot	0					0.00	0.00	0.00	0.00
Total						**195.95**	**0.01**	**0.00**	**197.17**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments Low Rise	228936					66.60	0.00	0.00	67.02
Apartments Mid Rise	296146					86.15	0.00	0.00	86.69
Parking Lot	-250					-0.07	0.00	0.00	-0.07
Total						**152.68**	**0.00**	**0.00**	**153.64**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

	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	1.39	0.02	1.45	0.00		0.00	0.01		0.00	0.01	0.00	2.32	2.32	0.00	0.00	2.37
Unmitigated	1.39	0.02	1.45	0.00		0.00	0.01		0.00	0.01	0.00	2.32	2.32	0.00	0.00	2.37
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.37					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.98					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	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
Landscaping	0.05	0.02	1.45	0.00		0.00	0.01		0.00	0.01	0.00	2.32	2.32	0.00	0.00	2.37
Total	**1.40**	**0.02**	**1.45**	**0.00**		**0.00**	**0.01**		**0.00**	**0.01**	**0.00**	**2.32**	**2.32**	**0.00**	**0.00**	**2.37**

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	0.37					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.98					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	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
Landscaping	0.05	0.02	1.45	0.00		0.00	0.01		0.00	0.01	0.00	2.32	2.32	0.00	0.00	2.37
Total	**1.40**	**0.02**	**1.45**	**0.00**		**0.00**	**0.01**		**0.00**	**0.01**	**0.00**	**2.32**	**2.32**	**0.00**	**0.00**	**2.37**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Reclaimed Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					21.94	0.30	0.01	30.70
Unmitigated					27.43	0.38	0.01	38.38
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments Low Rise	5.40778 / 3.40926					12.04	0.17	0.00	16.86
Apartments Mid Rise	6.90633 / 4.35399					15.38	0.21	0.01	21.53
Parking Lot	0 / 0					0.00	0.00	0.00	0.00
Total						**27.42**	**0.38**	**0.01**	**38.39**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments Low Rise	4.32623 / 2.7274					9.64	0.13	0.00	13.48
Apartments Mid Rise	5.52506 / 3.48319					12.31	0.17	0.00	17.22
Parking Lot	0 / 0					0.00	0.00	0.00	0.00
Total						**21.95**	**0.30**	**0.00**	**30.70**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					8.82	0.52	0.00	19.78
Unmitigated					17.65	1.04	0.00	39.55
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments Low Rise	38.18					7.75	0.46	0.00	17.37
Apartments Mid Rise	48.76					9.90	0.58	0.00	22.18
Parking Lot	0					0.00	0.00	0.00	0.00
Total						**17.65**	**1.04**	**0.00**	**39.55**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments Low Rise	19.09					3.88	0.23	0.00	8.68
Apartments Mid Rise	24.38					4.95	0.29	0.00	11.09
Parking Lot	0					0.00	0.00	0.00	0.00
Total						**8.83**	**0.52**	**0.00**	**19.77**

9.0 Vegetation

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons				MT			
Unmitigated					0.00	0.00	0.00	0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

9.1 Vegetation Land Change

Vegetation Type

	Initial/Final	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	Acres	tons				MT			
Others	0 / 0					0.00	0.00	0.00	0.00
Total						**0.00**	**0.00**	**0.00**	**0.00**

Appendix B – Biological Resources

- **California Department of Fish and Game.** Endangered Species List for Livermore Quad. *CNDDB Quick Viewer.* [Online] [Cited: March 5, 2013.] http://imaps.dfg.ca.gov/viewers/cnddb_quickviewer/app.asp.
- **U.S. Fish & Wildlife Services.** *Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the Livermore (446A) U.S.G.S. 7 1/2 minute Quad.* Sacramento, CA : s.n., Database last updated: September 18, 2011; Report Date: March 5, 2013.
- **United States Fish & Wildlife Service.** National Wetlands Inventory. [Online] [Cited: March 5, 2013.] http://www.fws.gov/wetlands/Wetlands-Mapper.html.

U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office

Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the LIVERMORE (446A) U.S.G.S. 7 1/2 Minute Quad

Database last updated: September 18, 2011
Report Date: March 5, 2013

Listed Species

Invertebrates

Branchinecta conservatio
Conservancy fairy shrimp (E)

Branchinecta longiantenna
longhorn fairy shrimp (E)

Branchinecta lynchi
Critical habitat, vernal pool fairy shrimp (X)
vernal pool fairy shrimp (T)

Fish

Hypomesus transpacificus
delta smelt (T)

Oncorhynchus mykiss
Central California Coastal steelhead (T) (NMFS)
Central Valley steelhead (T) (NMFS)

Amphibians

Ambystoma californiense
California tiger salamander, central population (T)
Critical habitat, CA tiger salamander, central population (X)

Rana draytonii
California red-legged frog (T)
Critical habitat, California red-legged frog (X)

Reptiles

Masticophis lateralis euryxanthus

Alameda whipsnake [=striped racer] (T)

Birds

Sternula antillarum (=Sterna, =albifrons) browni
California least tern (E)

Mammals

Vulpes macrotis mutica
San Joaquin kit fox (E)

Plants

Cordylanthus palmatus
palmate-bracted bird's-beak (E)

Key:

- (E) Endangered - Listed as being in danger of extinction.
- (T) Threatened - Listed as likely to become endangered within the foreseeable future.
- (P) Proposed - Officially proposed in the Federal Register for listing as endangered or threatened.
- (NMFS) Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service. Consult with them directly about these species.
- Critical Habitat - Area essential to the conservation of a species.
- (PX) Proposed Critical Habitat - The species is already listed. Critical habitat is being proposed for it.
- (C) Candidate - Candidate to become a proposed species.
- (V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.
- (X) Critical Habitat designated for this species

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Results for LIVERMORE Quad (3712167) - 27 elements selected

Record	QUADNAME	ELMCODE	SCINAME	COMNAME	FEDSTATUS	CALSTATUS	DFGSTATUS	RAREPLANTRANK
1	Livermore	AAAAA01180	Ambystoma californiense	California tiger salamander	Threatened	Threatened	SSC	
2	Livermore	AAABH01022	Rana draytonii	California red-legged frog	Threatened	None	SSC	
3	Livermore	AAABH01050	Rana boylii	foothill yellow-legged frog	None	None	SSC	
4	Livermore	ABNKC06010	Elanus leucurus	white-tailed kite	None	None	FP	
5	Livermore	ABNKC19120	Buteo regalis	ferruginous hawk	None	None	WL	
6	Livermore	ABNSB10010	Athene cunicularia	burrowing owl	None	None	SSC	
7	Livermore	ABPAT02011	Eremophila alpestris actia	California horned lark	None	None	WL	
8	Livermore	ABPBXB0020	Agelaius tricolor	tricolored blackbird	None	None	SSC	
9	Livermore	AMACC05030	Lasiurus cinereus	hoary bat	None	None		
10	Livermore	AMACC08010	Corynorhinus townsendii	Townsend's big-eared bat	None	None	SSC	
11	Livermore	AMAJA03041	Vulpes macrotis mutica	San Joaquin kit fox	Endangered	Threatened		
12	Livermore	AMAJF04010	Taxidea taxus	American badger	None	None	SSC	
13	Livermore	ARAAD02030	Emys marmorata	western pond turtle	None	None	SSC	
14	Livermore	CTT36210CA	Valley Sink Scrub	Valley Sink Scrub	None	None		
15	Livermore	CTT62100CA	Sycamore Alluvial Woodland	Sycamore Alluvial Woodland	None	None		
16	Livermore	ICBRA03030	Branchinecta lynchi	vernal pool fairy shrimp	Threatened	None		
17	Livermore	ICBRA06010	Linderiella occidentalis	California linderiella	None	None		
18	Livermore	PDAST4R0P1	Centromadia parryi ssp. congdonii	Congdon's tarplant	None	None		1B.2
19	Livermore	PDBOR0V0B0	Plagiobothrys glaber	hairless popcornflower	None	None		1A
20	Livermore	PDBRA2R010	Tropidocarpum capparideum	caper-fruited tropidocarpum	None	None		1B.1
21	Livermore	PDCHE040B0	Atriplex cordulata var. cordulata	heartscale	None	None		1B.2
22	Livermore	PDCHE041F3	Atriplex joaquinana	San Joaquin spearscale	None	None		1B.2
23	Livermore	PDCHE042L0	Atriplex depressa	brittlescale	None	None		1B.2
24	Livermore	PDCHE042M0	Atriplex minuscula	lesser saltscale	None	None		1B.1
25	Livermore	PDFAB400R5	Trifolium hydrophilum	saline clover	None	None		1B.2
26	Livermore	PDPLM0C0Q0	Navarretia prostrata	prostrate vernal pool navarretia	None	None		1B.1
27	Livermore	PDSCR0J0J0	Chloropyron palmatum	palmate-bracted bird's-beak	Endangered	Endangered		1B.1

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Kottinger Senior Housing

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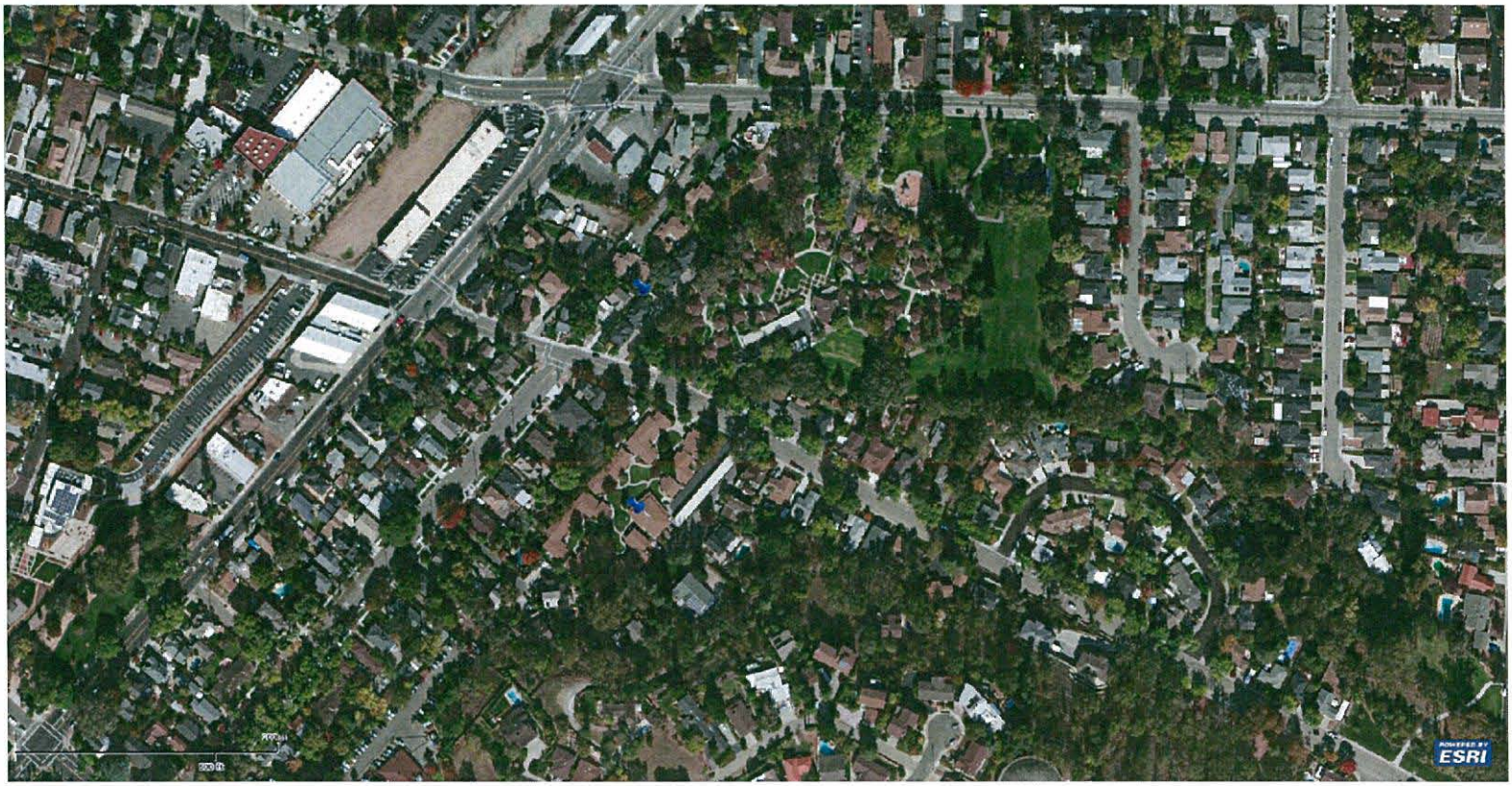

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Appendix C – Cultural Resources

- **Roland-Nawi, Carol.** *Letter to Linda M. Gardener, Housing Director, Alameda County Community Development Agency in RE: Demolition & Multifamily Senior Affordable Housing Development Located at 240 & 251 Kottinger Drive, 4138 Vineyard Avenue, and 4153 Regalia Court, Pleasanton.* Sacramento, CA : State of California, Office of Historic Preservation, Department of Parks and Recreation, May 9, 2013. Refer to HUD_2013_0415_001.

- **Gardner, Linda M.** *Letter to Dr. Carol Roland-Nawi, State Historic Preservation Officer in RE: Kottinger Senior Housing, 240 & 251 Kottinger Drive, 4138 Vineyard Avenue, and 4153 Regalia Court, Pleasanton, Alameda County California 94566.* Hayward, CA : Alameda County Community Development Agency, Housing and Community Development Department, April 11, 2013.

- **AEM Consulting.** *Historic and Cultural Resources Evaluation for Section 106 Review, Kottinger Senior Housing, 240 & 251 Kottinger Drive, 41385 Vineyard Avenue and 4153 Regalia Court, Pleasanton, CA 94566* . Santa Rosa, CA : s.n., April 2013.

- **Beard, Vicki.** *An Architectural Survey for the Kottinger Senior Housing Project, Pleasanton, Alameda County, California.* Rohnert Park, CA : Tom Origer & Associates, March 29, 2013.

- **Beard, Vicki.** *Letter to Cinnamon Crake, AEM Consulting in RE: Archival Search Results Kottinger Affordable Senior Homes, Pleasanton, Alameda Counmty.* Rohnert Park, CA : Tom Origer & Associates, March 29, 2013.

- **Thiemann, Kelly M.** *Letters to Native American Tribes (various).* Hayward, CA : Alameda County Community Development Agency, Housing and Community Development Department, March 19, 2013.

- **Pilas-Treadway, Debbie.** *Letter to Vern Miller, AEM Consulting in RE: Redevelopment Project in Pleasanton, Alameda County.* s.l. : Native American Heritage Commission, March 1, 2013.

- **Miller, Vern.** *Letter to Debbie Pilas-Treadway, Native American Heritage Commission in RE: Redevelopment project in Pleasanton, Alameda County.* Santa Rosa, CA : AEM Consulting, March 15, 2013.

- **U.S. Department of Housing and Urban Development.** *Appendix A, When to Consult With Tribes Under Section 106.*

- **U.S. Department of Housing and Urban Development.** *Tribal Directory Assessment Information for Alameda County.* March 4, 2013.

STATE OF CALIFORNIA – THE NATURAL RESOURCES AGENCY

EDMUND G. BROWN, JR., *Governor*

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
1725 23rd Street, Suite 100
SACRAMENTO, CA 95816-7100
(916) 445-7000 Fax: (916) 445-7053
calshpo@parks.ca.gov
www.ohp.parks.ca.gov

May 9, 2013

Refer to HUD_2013_0415_001

Linda M. Gardener
Housing Director
Alameda County Community Development Agency
224 West Winton Avenue, Room 108
Hayward, CA 94544-1215

Dear Ms. Gardener:

Re: Demolition & Multifamily Senior Affordable Housing Development Located at 240 & 251 Kottinger Drive, 4138 Vineyard Avenue, & 4153 Regalia Court, Pleasanton, CA

Thank you for forwarding the above referenced undertaking to our office for review and comment pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations found at 36 CFR Part 800. The regulations and advisory material are found at www.achp.gov.

Undertaking
You have informed us that the County of Alameda is proposing to demolish existing properties and construct a 172-189 unit multifamily senior affordable housing project, using funding from the U.S. Department of Housing and Urban Development, on the 5.9 acre site located at 240 & 251 Kottinger Drive, 4138 Vineyard Avenue, and 4153 Regalia Court in Pleasanton, CA.

APE
The area of potential effects (APE) for this undertaking is the subject parcel and all adjacent parcels.

Identification of Historic Properties
You have informed us that the APE for this undertaking includes several properties that are not eligible for listing in the National Register of Historic Places and two properties that are potentially eligible for listing in the National Register. We concur that the following properties are not eligible:

- 228 Kottinger Drive
- 4162 Vineyard Avenue
- 4160 Vineyard Avenue
- 4158 Vineyard Avenue
- 4149 Vineyard Avenue
- 4141 Vineyard Avenue
- 4143 Vineyard Avenue
- 4095 Vineyard Avenue

2013 MAY 13 AM 10:59
ALCO - HCD

- 4089 Vineyard Avenue
- 266 Kottinger Drive
- 278 Kottinger Drive
- 271 Kottinger Drive
- 269 Kottinger Drive
- 265 Kottinger Drive
- 259 Kottinger Drive
- 255 Kottinger Drive
- 4354 2nd Street
- 4348 2nd Street
- 4340 2nd Street
- 4332 2nd Street
- 4326 2nd Street
- 4318 2nd Street
- 4310 2nd Street
- 229 Kottinger Drive
- 4136 Vineyard Drive

The following properties are potentially eligible for listing in the National Register and are being treated as historic properties for the purposes of this undertaking only:

- 4156 Vineyard Avenue
- 4303 2nd Street

Assessment of Effects

The County has determined that the undertaking, as planned, will not have an adverse effect on the historic properties within the APE. We do not object to the County's finding.

Your consideration of historic properties in the project planning process is appreciated. If you have questions please contact Shannon Lauchner, State Historian II, with the Local Government Unit at (916)445-7013 or by email at shannon.lauchner@parks.ca.gov.

Sincerely,

Carol Roland-Nawi, Ph.D.
State Historic Preservation Officer

ALAMEDA COUNTY COMMUNITY DEVELOPMENT AGENCY
HOUSING AND COMMUNITY DEVELOPMENT DEPARTMENT

Chris Bazar
Agency Director

hcd

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Housing Director

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acgov.org/cda

April 11, 2013

Dr. Carol Roland-Nawi
State Historic Preservation Officer
State of California, Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, CA 95816

RE: Kottinger Senior Housing, 240 & 251 Kottinger Drive, 4138 Vineyard Avenue, and 4153 Regalia Court, Pleasanton, Alameda County, California 94566

Dear Dr. Roland-Nawi:

The proposed Kottinger Senior Housing affordable housing project envisions the redevelopment of four parcels by demolition of existing structures and new construction of 172-189 residential units with parking and landscaped areas. The undertaking will be constructed on four parcels with a combined size of 5.9 acres.

Enclosed are materials to identify and evaluate historic properties within the Area of Potential Effects of this undertaking under Section 106 of the Historic Preservation Act and its implementing regulations at 36 CFR Part 800. As the Agency Official for this undertaking, I request your views regarding the effect of the undertaking upon historic properties. The project proponent, MidPen Housing Corporation has engaged AEM Consulting to prepare the federal environmental review under the National Environmental Policy Act and 24 CFR Part 58, HUD Environmental Review Regulations, prior to use of HUD program funds. AEM Consulting will be pursuing the related federal consultations necessary for the undertaking on behalf of the project proponent, the City of Pleasanton and Alameda County.

Upon reviewing the evaluation presented in the attached correspondence from Vern Miller, Principal, AEM Consulting, I concur with the precise description of the undertaking, and the Area of Potential Effects. As Agency Official I also concur with the recommended determination that no historic properties will be adversely affected by the undertaking. The reason is the historic properties that appear potentially eligible for inclusion in the National Register of Historic Places in the Area of Potential Effects will not be adversely affected by the undertaking as defined in 36 CFR Part 800 § 800.16(i).

Sincerely yours,

Linda M. Gardner
Housing Director
Encl: Historic Evaluation, Kottinger Senior Housing, Pleasanton, California

HISTORIC AND CULTURAL RESOURCES EVALUATION FOR SECTION 106 REVIEW

KOTTINGER SENIOR HOUSING

240 & 251 KOTTINGER DRIVE
4138 VINEYARD AVENUE AND
4153 REGALIA COURT
PLEASANTON, CA 94566

Prepared for the City of Pleasanton, Alameda County and MidPen Housing Corporation

AEM Consulting
310 PACIFIC HEIGHTS DRIVE
SANTA ROSA, CA 95403

APRIL 2013

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BACKGROUND

MidPen Housing Corporation ("MidPen") proposes to use funding from the U.S. Department of Housing and Urban Development (HUD) as administered by Alameda County to construct an affordable senior housing project. To secure HUD release of funds for the project, Alameda County must provide a suitable federal Environmental Review Record to HUD prepared according to the requirements of the National Environmental Policy Act (NEPA) and HUD's own Environmental Regulations found in 24 CFR Part 58. The appropriate level of federal environmental review in this case is an Environmental Assessment leading to a Finding of No Significant Impact (FONSI). Both the Environmental Assessment and FONSI must be prepared for signature by the Certifying Officer for Alameda County.

To achieve a FONSI, HUD requires that the Environmental Assessment demonstrates that the project complies with all applicable federal laws and regulations, including Section 106 of the National Historic Preservation Act. Regulations pertaining to Section 106 Review are found in 36 CFR Part 800.

Regulatory Context for Evaluation of Historical and Architectural Significance

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to take into account the effects of their undertakings on historic properties. The Section 106 process seeks to accommodate historic preservation concerns with the needs of federal undertakings through consultation among the agency official and other interested parties, beginning at the early stages of project planning. The goal of consultation is to identify historic properties potentially affected by the undertaking, assess the effects of the undertaking and seek ways to avoid, minimize or mitigate any adverse effects on historic properties. To evaluate the significance of an historical resource, its integrity, and the ability of a property to convey that significance, a building is evaluated according to the National Register.

PROJECT SITE LOCATION AND SETTING

MidPen proposes to develop a total of 172-189 affordable senior housing apartments on Kottinger Place located on Kottinger Drive and Vineyard Avenue in Pleasanton, California. The project involves the demolition of the existing apartments and new construction of Kottinger Place and Pleasanton Gardens Affordable Senior Apartments.

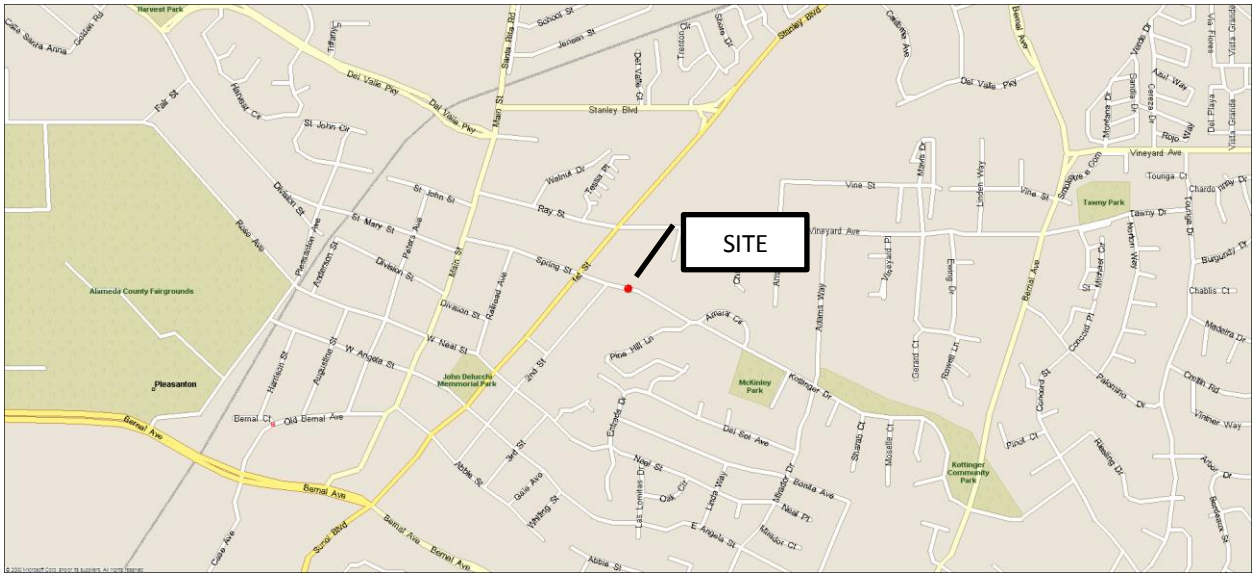
Details:

- 240 Kottinger Drive, Pleasanton, CA 94566 (APN 094-0095-033-03) – Kottinger Place (50 units)
- 251 Kottinger Drive, Pleasanton, CA 94566 (APN 094-0019-017) – Pleasanton Gardens (40 units)
- 4136 Vineyard Avenue, Pleasanton, CA 94566 (APN 094-0095-034) – Vacant Parcel
- 4153 Regalia Court (aka 4138 Vineyard Avenue), Pleasanton CA 94566 (Parcel to be divided – currently part of Kottinger Park APN 094-0095-017) – "Regalia House" (city-owned facility)

PROJECT LOCATION

Kottinger Senior Housing
Pleasanton, CA 94566

MAP 1 REGION



MAP 2 DETAIL

PROJECT LOCATION

Kottinger Senior Housing
Pleasanton, CA 94566

FIGURE 1 PROPOSED SITE PLAN

FIGURE 2 AERIAL VIEW OF SITE AND VICINITY

UNDERTAKING/PROJECT DESCRIPTION

The subject property consists of two city-owned senior housing developments, a vacant lot and a city owned building. The site is located on the north and south sides of Kottinger Drive in a mixed commercial and residential area of Pleasanton, California. The property totals approximately 5.9 acres and is improved with 29 one-story buildings totaling approximately 54,300 square feet. The subject property is currently occupied by a city owned building (Regalia House), Kottinger Place senior apartments (50 units), Pleasanton Gardens senior apartments (40 units) and a vacant lot. In addition to the subject property buildings, the property is improved with tenant garden areas, asphalt-paved parking areas and associated landscaping.

MidPen proposes to demolish the existing improvements and redevelop the site with 172-189 units of affordable senior housing to be known as "Kottinger Place" and "Pleasanton Gardens". The largest structures will be in the center of each site (separated by Kottinger Drive) at three stories. For Kottinger Place, parking will surround the three-story structure to ease the transition to single family homes adjacent to the property. Pleasanton Gardens' three story building will be similarly shielded and separated from existing single family homes adjacent to it.

Criteria for Evaluation

According to the guidelines of the National Register Criteria for Evaluation, the quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects:

That possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

> A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> B. That are associated with the lives of persons significant in our past; or
>
> C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> D. That have yielded, or may be likely to yield, information important in prehistory or history.

Section 106 compliance requires Alameda County to obtain the views of the State Historic Preservation Officer (SHPO) as to whether any of the project activities could have an "adverse effect" on the setting or character-defining features of any historically significant property in the

Area of Potential Effects (APE). A historically significant property is one that would be eligible for listing on the National Register of Historic Places, whether it is currently listed or not.

Context

The project site lies in a residential area of Pleasanton, near to downtown Pleasanton. The four project parcels are surrounded by residential land uses to the west, north and south and Kottinger Park to the east. One parcel, currently Pleasanton Gardens is west of Kottinger Drive, the other three parcels are on the east side of Kottinger Drive. The project parcel is adjacent to twenty-seven (27) other parcels, most of which contain single family homes constructed in the early to mid-20th century, and one is a park.

Area of Potential Effects

The Area of Potential Effects (APE) includes the subject site and twenty-seven other properties that surround and face the subject site. The APE was determined by including all properties adjacent to the project and within eyeshot. In each case the entire parcel was included. See map of the Area of Potential Effects (APE) below.

The APE for archeology is the site footprint.

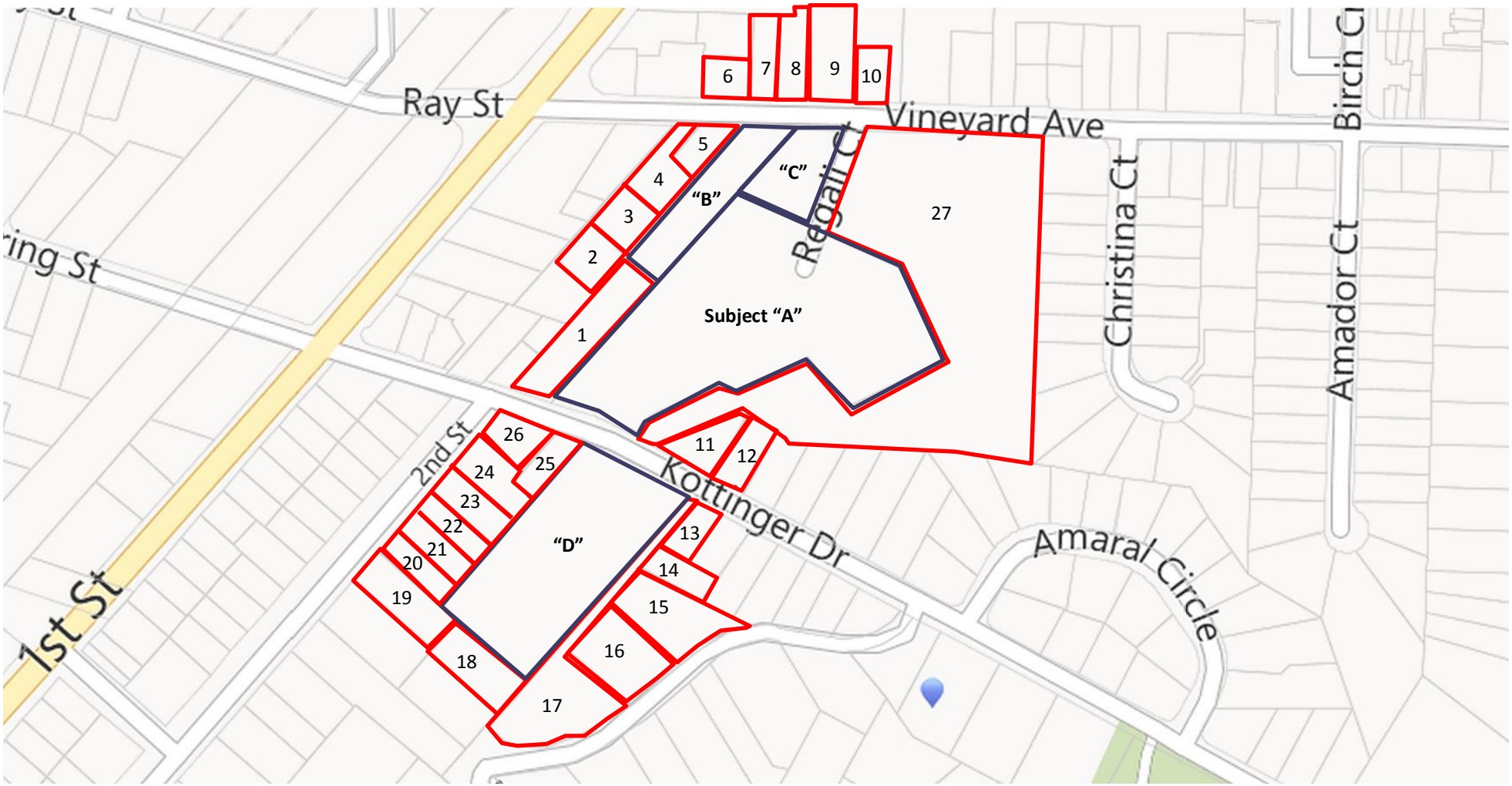


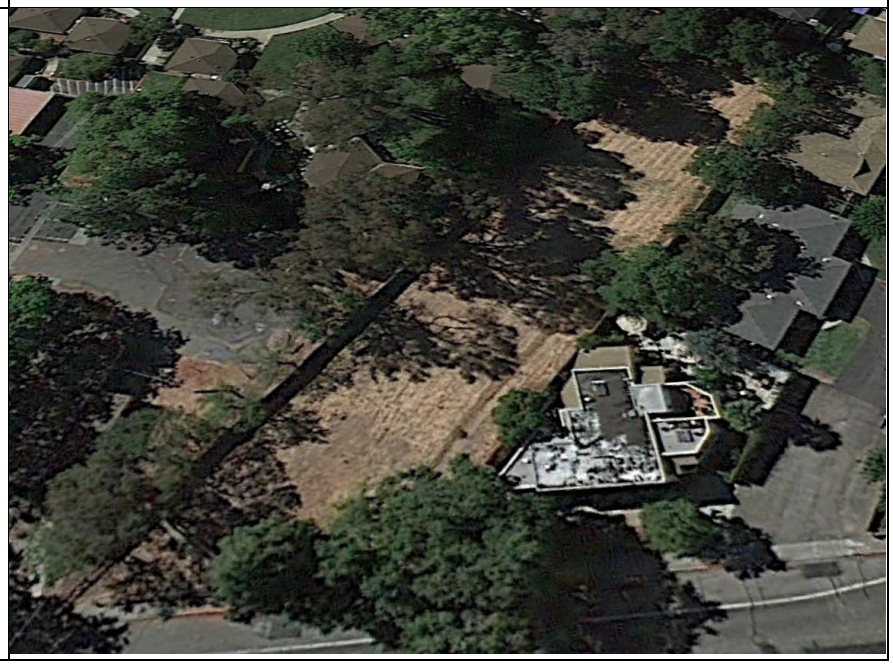
FIGURE 3 AREA OF POTENTIAL EFFECTS

A summary table of the APE properties is shown in the table below and discussed following the table.

APE Summary Table

APE	Address	Owner/APN	Comments	Photo
A	240 Kottinger Drive[1]	Housing Authority of the City of Pleasanton 094-0095-033-03	Subject Property Kottinger Place 50 units 3.45 acres To be demolished	

[1] All addresses in the Area of Potential Effects are located in Pleasanton, California 94566

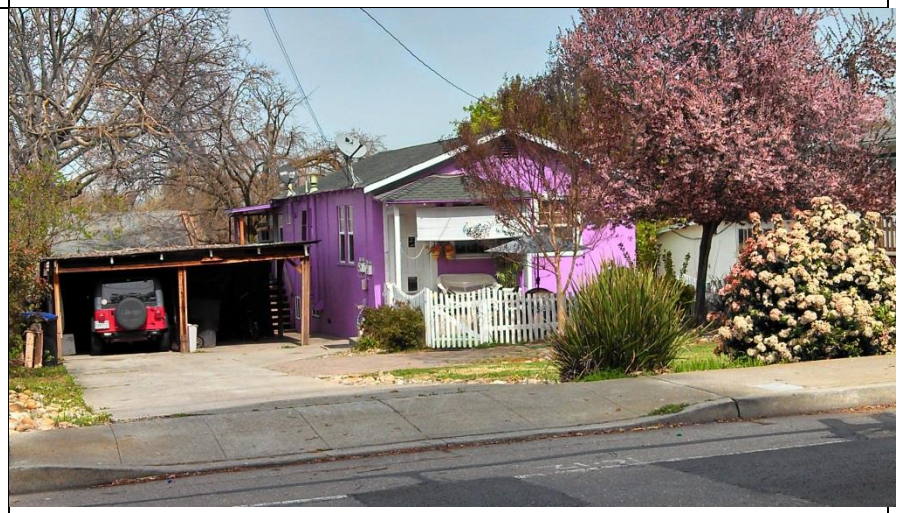
APE	Address	Owner/APN	Comments	Photo
B	4138 Vineyard Avenue	City of Pleasanton 094-0095-017	Subject Property Vacant Land 0.5 acres	

APE	Address	Owner/APN	Comments	Photo
C	4153 Regalia Court	City of Pleasanton 094-0095-034	Subject Property Currently part of the Kottinger Park parcel (APE #27) Unknown size to be sub-divided Occupied by “Regalia House” To be demolished	
D	251 Kottinger Drive	Pleasanton Gardens LLC 094-0019-017	Subject Property Pleasanton Gardens 40 Units 1.94 acres To be demolished Year Built 1970	

APE	Address	Owner/APN	Comments	Photo
1	228 Kottinger Drive	Gabriel & Maria Silveira 094-0095-048	Quadruplex Year Built 1999/2000	
2	4162 Vineyard Avenue	Albano L & Rosa M Cardoso 094-0095-021	Duplex Year Built 1963	

APE	Address	Owner/APN	Comments	Photo
3	4160 Vineyard Avenue	Donald H & Aldean E Laudenbach 094-0095-020	Duplex Year Built 1963	
4	4158 Vineyard Avenue	Housing Options Utilizing Supportive Environments 094-0095-042	Single Family Residence Year Built 1963	

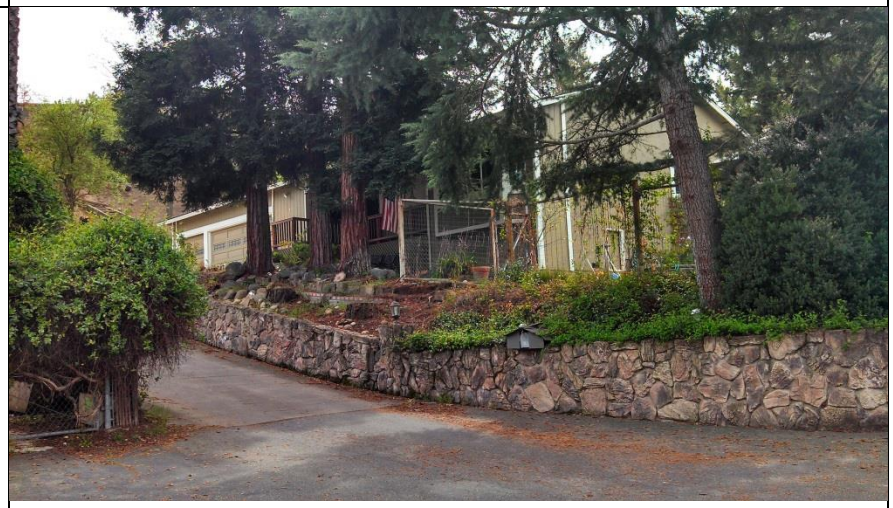
APE	Address	Owner/APN	Comments	Photo
5	4156 Vineyard Avenue	Roger N & Elvira E Benson 094-0095-041	Single Family Residence Year Built 1910 / 1968	
6	4149 Vineyard Avenue	James A Shotwell 094-0095-007	Duplex Year Built 1951	

APE	Address	Owner/APN	Comments	Photo
7	4141 Vineyard Avenue	Gloria R & John J Purcell 094-0095-008	Single Family Home Year Built 1900 / 1920	
8	4143 Vineyard Avenue	Scott J Parkey 094-0095-009-02	Single Family Residence Year Built 1962	

APE	Address	Owner/APN	Comments	Photo
9	4095 Vineyard Avenue	Paul E Sr & Mary L Gamache 094-0095-012	Multiple Residential Building 8 Units Year Built 1966	
10	4089 Vineyard Avenue	Louise M Couturier 094-0095-043	Single Family Residence Year Built 1992 / 1993	

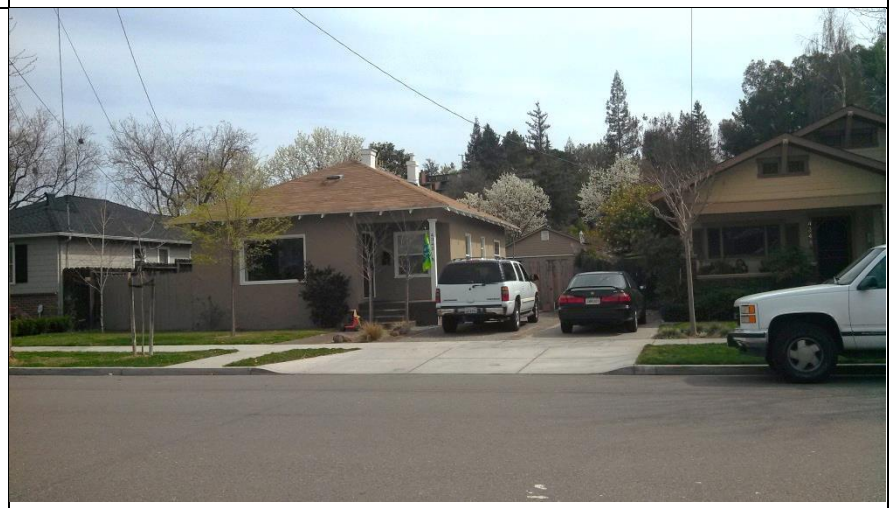
APE	Address	Owner/APN	Comments	Photo
11	266 Kottinger Drive	Russell S Herron & Erica E Oudeboonherron 094-0095-035	Single Family Residence Year Built 1954 / 1955	
12	278 Kottinger Drive	Thomas A & Briana L Scherer 094-0095-036	Single Family Residence Year Built 1954 / 1962	

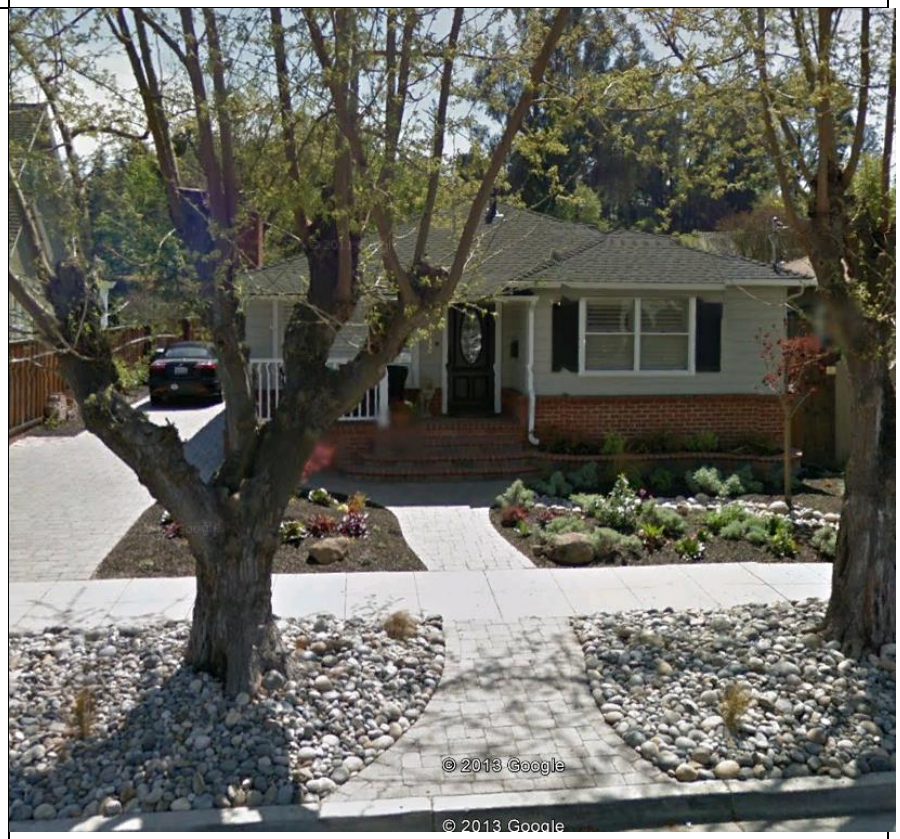
APE	Address	Owner/APN	Comments	Photo
13	271 Kottinger Drive	Bruce Darlaston & Susanne Woods 094-0019-020	Single Family Residence Year Built 1953 / 1954	
14	269 Kottinger Drive	Mark W Onieal 094-0019-019	Single Family Residence Year Built 1954 / 1975	

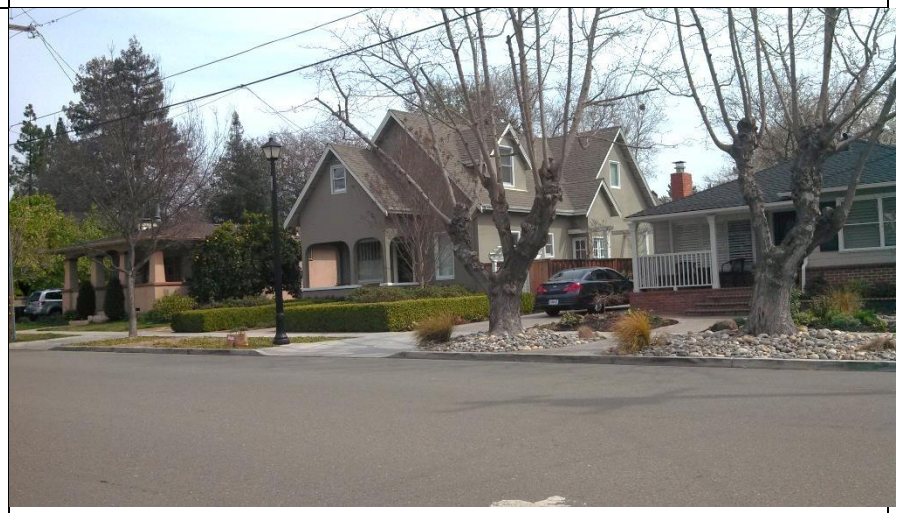
APE	Address	Owner/APN	Comments	Photo
15	265 Kottinger Drive	Daryl & Jodi Dalrymple	Single Family Residence Year Built 1977 / 1978	
16	259 Kottinger Drive	Brian & Amber Ross 094-0019-031	Single Family Residence Year Built 1977 / 1979	

APE	Address	Owner/APN	Comments	Photo
17	255 Kottinger Drive	Robert Harrach 094-0019-032	Single Family Residence Year Built 1959	
18	4354 2nd Street	D & H Christison Family Trust 094-0019-035	Single Family Residence Year Built 1979 / 1980	

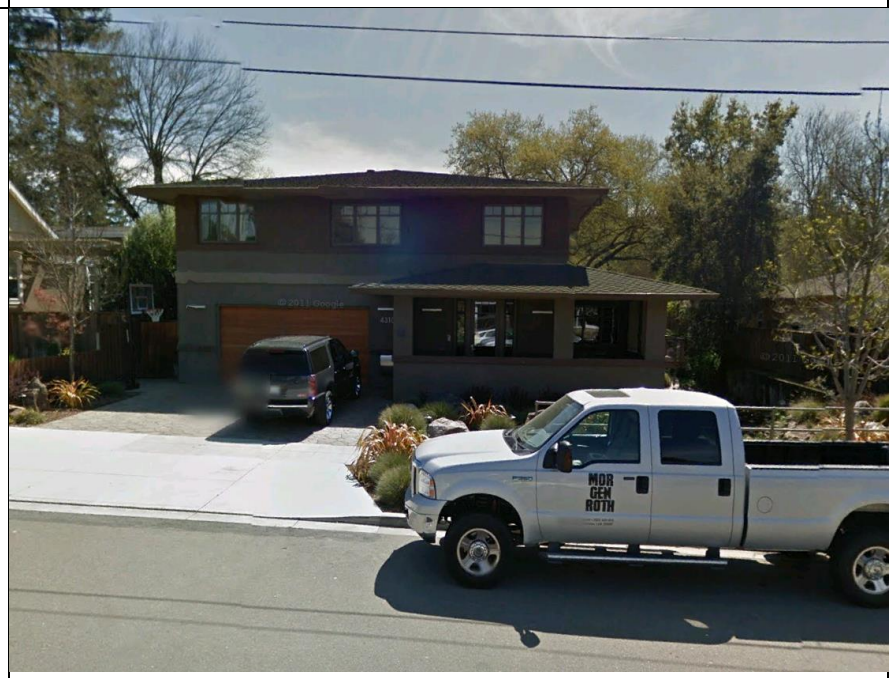
APE	Address	Owner/APN	Comments	Photo
19	4348 2nd Street	Walter D Jr & Candace L Aderman 094-0019-034	Single Family Residence Year Built 1910	

APE	Address	Owner/APN	Comments	Photo
20	4340 2nd Street	Daniel R Safreno & Janet M Safreno Rich 094-0019-010	Single Family Residence Year Built 1911 / 1920	

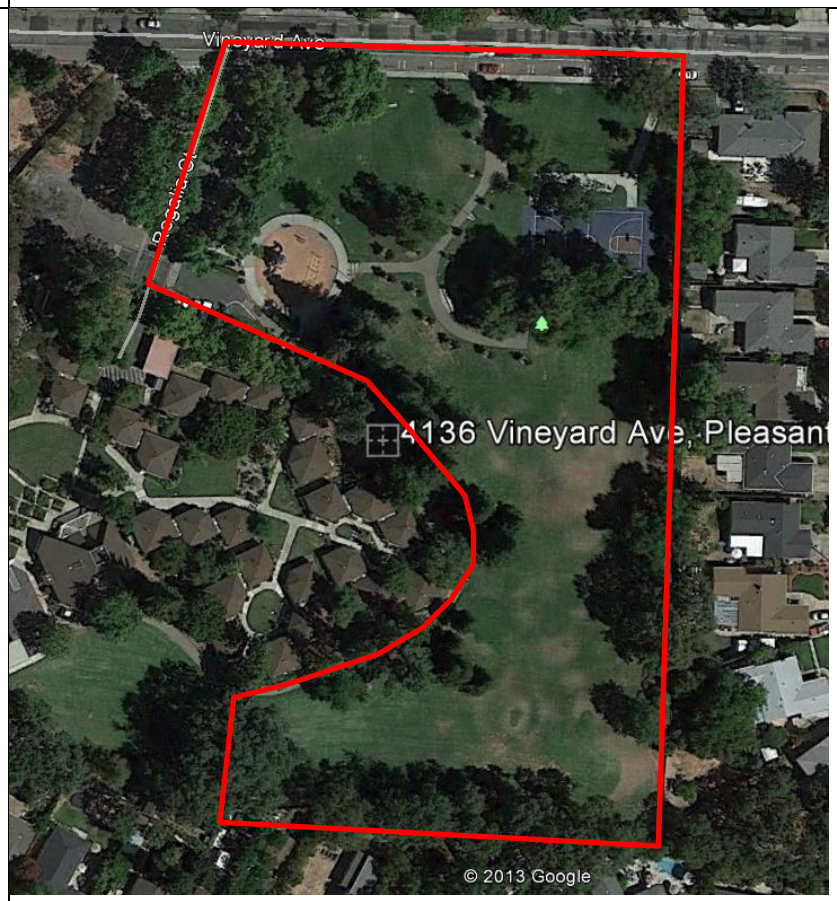
APE	Address	Owner/APN	Comments	Photo
21	4332 2nd Street	Howe Trust 094-0019-011	Single Family Residence Year Built 1951 / 1955	

APE	Address	Owner/APN	Comments	Photo
22	4326 2nd Street	Robert E & Patricia C Carey 094-0019-012	Single Family Residence Year Built 1890 / 1951	

APE	Address	Owner/APN	Comments	Photo
23	4318 2nd Street	Michael J & Rebecca A Duret 094-0019-013	Single Family Residence Year Built 1928 / 1976	

APE	Address	Owner/APN	Comments	Photo
24	4310 2nd Street	James H & Jean P Morgenroth 094-0019-014-01	Single Family Residence Year Built 2007	

APE	Address	Owner/APN	Comments	Photo
25	229 Kottinger Drive	James H & Jean P Morgenroth 094-0019-016-01	Single Family Residence Year Built 1890 / 1895	
26	4304 2nd Street	John P Maille & Sharon L Massingham 094-0019-015	Single Family Residence Year Built 1890 / 1950	

APE	Address	Owner/APN	Comments	Photo
27	4136 Vineyard Drive	City of Pleasanton 094-0095-034	Kottinger Park	

APE Properties Evaluation

Subject Property A

Subject property A is occupied by Kottinger Place affordable senior housing constructed in 1973. This complex is less than 50 years old. While the National Register program provides for the inclusion of properties younger than 50 years they must be of exceptional importance. This property does not meet that standard.

Subject Property B

Subject property B is a vacant lot that was occupied by a residence, but it was demolished in 2005 when purchased by the City of Pleasanton. As a vacant parcel, it holds no discernible historic or cultural resources.

Subject Property C

Subject property C contains the city-owned Pleasanton Women's Club/Regalia House. This clubhouse appears to be a mid-20th century building, and was probably part of the earlier Kottinger Village complex. The USGS 1951 map of this area depicts the earlier development and a building is shown at the location of the clubhouse. This building is a rectangular, frame structure with a slightly peaked, gabled roof. The entry is on the east side of the building and is a simple stoop with a shed roof. Cladding is stucco. Windows are primarily two-light, wood-sashed, sliding windows topped by a band of fixed windows. Cladding is stucco. This building is unlikely to meet the eligibility criteria for inclusion in the National Register.

Subject Property D

Subject property D is occupied by Pleasanton Gardens affordable senior housing project constructed in 1969. This complex is less than 50 years old and does not meet the "exceptionally important" standard required for inclusion in the National Register.

APE Property #1

APE #1 is a quadruplex built between 1999 and 2000. As the age is 14 years old, this property will not be evaluated further for historic importance.

APE Property #2, #3 and #4

Parcels 2, 3, and 4 are situated on a private street off of Vineyard Avenue and contain duplexes built in 1963 using identical plans. All are frame buildings with stucco siding and aluminum-sashed win-dows. These Ranch-style dwellings have low, hipped-roofs and long, rectangular footprints. They are not architecturally distinctive and are not likely to meet National Register eligibility criteria.

APE Property #5

Parcel 5 has a 1910, Spanish Eclectic dwelling with a flat, parapetted roof. The front of the house features large, arched windows that mimic the arched entryway. Wings extend from the core of the house and have small courtyards enclosed by high walls. This house could be eligible for the National Register if formally evaluated.

APE Property #6

The single-family residence on Parcel 6 is a Ranch-style building constructed in 1962. It is a frame structure clad with stucco, and has a hipped roof. At present the windows are double-hung, vinyl-clad sashes. It appears that this house was a duplex (similar to those on Parcels 2 through 4) that has been renovated. One of the two central garages has been enclosed and the wall plan on the east end extend-ed to match the front edge of the garage. The roof has been reconfigured to account for the added space. This building is unlikely to meet the eligibility criteria for inclusion in the National Register.

APE Property #7

Parcel 7 has a small, front-gabled frame building with a hipped roof stoop. At present the building has vinyl-clad windows and is clad with stucco. This building is unlikely to meet the eligibility criteria for inclusion in the National Register.

APE Property #8

Parcel 8 contains a front-gabled, frame dwelling with wood panel siding. The entryway has a simple stoop with a separate gabled roof. Windows are aluminum-sashed fixed and sliding windows. County records indicate that it was constructed in 1951. This building is unlikely to meet the eligibility criteria for inclusion in the National Register.

APE Property #9

Parcel 9 has a two-story apartment complex constructed circa 1960. This building has a rectangular plan with an end-gabled roof. Windows are aluminum and vinyl-sashed. This building is unlikely to meet the eligibility criteria for inclusion in the National Register.

APE Property #10

APE #10 is a single family residence built in 1992. As the age is only 21 years old, it will not be evaluated further in this report.

APE Property #11, #12, #13, and #14

The dwellings on Parcels 11 through 14 were constructed in the early 1950s as part of the post-war building boom. Most are modest, one-story, frame structures with low-pitched gabled roofs. Cladding includes a mix of lapped boards and stucco with brick or faux stone trim. The exception is the two-story home on Parcel 14 that appears to have been renovated in recent years. These buildings are unlikely to meet the eligibility criteria for inclusion in the National Register.

APE Property #15

APE #15 is a single family residence built in 1977 and 1978, making it 36 years old. As the age is less than 50, this property will not be discussed further.

APE Property #16

APE #16 is a single family residence built in 1977 and 1978, making it 36 years old. As the age is less than 50, this property will not be discussed further.

APE Property #17

The house on Parcel 17 is a 1959, gable-roofed, frame building with vertical boards and battens clad-ding the lower part of the house and lapped siding in the gables. This is not an architecturally distinctive building and is unlikely to meet the eligibility criteria for inclusion in the National Register.

APE Property #18

APE #18 is a single family residence built in 1979 and 1980, making it 34 years old. As such, it will not be evaluated for historical significance.

Parcels 19 through 26 face 2nd Street and their construction dates range from the late-19th to the mid-20th century.

APE Property #19

The house on Parcel 19 is a Craftsman home constructed in 1910. It features a gabled roof with a separate gabled roof over the front porch. Decorative brackets are at the gable ends. Porch supports are simple wood columns with brick bases. Windows at the front of the house appear to have been changed to large-paned fixed windows. This building is unlikely to meet the eligibility criteria for inclusion in the National Register.

APE Property #20

Parcel 20 has a very modest, hipped roof dwelling with no real ornamentation. The exterior is stucco and the windows are newer, vinyl-clad sashes. This building is unlikely to meet the eligibility criteria for inclusion in the National Register.

APE Property #21

Parcel 21 contains a 1951, frame house on a rectangular plan. The roof is cross-hipped and the exterior has lapped siding with brick trim. This building is unlikely to meet the eligibility criteria for inclusion in the National Register.

APE Property #22

County records indicate that the house on Parcel 22 was constructed in 1890; however, its Tudor style suggests that it is from the 1920s or 30s. This house has a steeply pitched, gabled roof with cross gables and gabled dormers. Cladding is stucco. Windows at the front of the house are large, fixed panes. Elsewhere they are one-over-one double-hung sashes. The garage at the rear of the parcel mimics the style of the house. If the county's construction date for this house is correct, it has been modified extensively and it is unlikely to meet the eligibility criteria for inclusion in the National Register.

APE Property #23

The house on Parcel 23 is a hipped-roof, Craftsman home with a full-width porch beneath the principal roof. Porch supports are tapered columns. The windows at the front of the house are typical Craftsman-style windows with multiple panes in the upper sash and a single pane in the lower. This house is not an especially good example of the Craftsman style and is unlikely to meet the eligibility criteria for inclusion in the National Register.

APE Property #24

APE #24 is a single family residence built in 2007. As it is only 6 years old, it will not be discussed further.

APE Property #25 and #26

The buildings on Parcels 25 and 26 are vernacular homes built in 1890. Both were built on a hall-and-parlor plan with side-gabled roofs that extend low over the front porch. The house on Parcel 26 appears to have been raised to accommodate a sub-ground space, possibly a basement. Craftsman-style, tapered porch supports have been added to the front porch. At present, it is clad with stucco and the windows are vinyl, double-hung sashes. This building is highly modified and is unlikely to meet the eligibility criteria for inclusion in the National Register.

In contrast to the house on Parcel 26, the hall-and-parlor home on Parcel 25 appears little changed except for an addition at the rear. The original part of the house retains its cove-rustic, drop siding and six-over-six, double-hung windows. The front of the house has a shed roof supported by simple posts over the full-width stoop. This is one of the early buildings constructed in this area. It retains good integrity and is likely to meet the criteria for inclusion in the National Register.

APE Property #27

Parcel 27 is Kottinger Village Park, which was part of the Kottinger Village housing development of the 1940s; however, there are no surviving elements from that time.

Archeology

An archaeological survey of the project parcels was not possible because the parcel is covered with asphalt.

Cultural Resources Records Search

Archival research included examination of the library and project files at Tom Origer & Associates. A review (NWIC File No. 12-0836) was completed of the archaeological site base maps and records, survey reports, and other materials on file at the Northwest Information Center (NWIC), Sonoma State University, Rohnert Park.

Archival research found that there had been no previous survey of the project area, and that there are known resources within a one-mile radius.

There are no reported ethnographic sites within or near the project area.

Archival research found no buildings or structures within the APE that are listed on federal, state, or local registers. Review of historical maps found no evidence of buildings or structures within or near the APE before 1904 when the United States Geological Survey (USGS) mapped the area. By 1904, there were several houses within the APE and by 1951, The Kottinger Village housing development had been constructed between Vineyard Avenue and Kottinger Drive.

Native American Contact

The County of Alameda lists no Federally-Recognized Sovereign Indian Nations. The Native American Heritage Commission was contacted on March 1, 2013 with a letter request for a search of records regarding scared lands and other cultural sites within the project area. The Native American Heritage Commission responded on March 15, 2013 with a letter sent via FAX stating that a record search of the sacred land file failed to indicate the presence of Native American cultural resources in the immediate

project area. The Commission enclosed a list of Native American individuals and organizations to contact who may have knowledge of cultural resources in the project area. Subsequently, a letter was sent to each contact on March 19, 2013 initiating tribal consultation related to historic properties. To date, no response has been received. Copies of all are attached.

CONCLUSION

A survey of buildings on and surrounding the proposed project found that most would not be eligible for inclusion in the National Register; however, Parcels 5 and 26 contain buildings that could be found eligible if formal evaluations were completed. The house on Parcel 5 is a good and early example of Spanish Eclectic architecture. The hall-and-parlor home on Parcel 26 is one of the earliest houses built in this area and it retains good historical integrity.

In assessing potential project effects on these properties, we considered existing conditions, proposed conditions, and the proximity of the project to the two potentially eligible buildings. At present, both homes are in areas of high development with surrounding buildings that compromise the integrity of their settings. Removing the existing housing complexes and building new structures on those sites will not further affect their National Register eligibility.

There is the possibility that buried archaeological materials could be found during redevelopment of the site. If buried materials are encountered, all soil disturbing work should be halted at the location of any discovery until a qualified archaeologist completes a significance evaluation of the find(s) pursuant to Section 106 of the National Historic Preservation Act (36CFR60.4).

RECOMMENDED DETERMINATION

For purposes of Section 106 Review of this undertaking, AEM Consulting recommends that the Agency Official for HUD, Alameda County concur with the Area of Potential Effects and determine that no historic properties will be adversely affected by the undertaking. The reason is the historic properties that appear potentially eligible for inclusion in the National Register of Historic Places in the Area of Potential Effects will not be adversely affected by the undertaking as defined in 36 CFR Part 800 § 800.16(i).

It is further recommended that the following conditions of approval be implemented as part of the project:

COA1. There is the possibility that buried archaeological materials could be found. If buried materials are encountered, all soil disturbing work should be halted at the location of any discovery until a qualified archaeologist completes a significance evaluation of the find(s) pursuant to Section 106 of the National Historic Preservation Act (36CFR60.4). Prehistoric archaeological site indicators expected within the general area include: chipped chert and obsidian tools and tool manufacture waste flakes; grinding and hammering implements that look like fist-size, river-tumbled stones; and for some rare sites, locally darkened soil that generally contains abundant archaeological specimens. Historical remains expected in the general area commonly include items of ceramic, glass, and metal. Features that might be present include structure remains (e.g., cabins or their foundations) and pits containing historical artifacts.

COA2. In the event that human skeletal remains are uncovered at the project site during construction or ground-breaking activities, all work shall immediately halt and the Alameda County Coroner

shall be contacted to evaluate the remains, and shall follow the procedures and protocols pursuant to Section 15064.5 (e)(1) of the CEQA Guidelines. If the County Coroner determines that the remains are Native American, the City shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, and all excavation and site preparation activities shall cease within a 50-foot radius of the find until appropriate arrangements are made. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume construction activities. Monitoring, data recovery, determination of significance and avoidance measures (if applicable) shall be completed expeditiously.

Attachments:

Beard, Vicki. *An Architectural Survey for the Kottinger Senior Housing Project, Pleasanton, Alameda County, California.* Tom Origer & Associates. Dated March 29, 2013.

Beard, Vicki. *Letter to Cinnamon Crake, AEM Consulting in RE: Archival Search Results Kottinger Affordable Senior Homes, Pleasanton, Alameda County.* Tom Origer & Associates. Dated March 29, 2013.

MidPen Housing, Inc. *Neighborhood Visual Simulations.*

U.S. HUD. *Appendix A, When to Consult with Tribes Under Section 106.*

U.S. HUD. *Tribal Directory Assessment Information for Alameda County.* Dated March 4, 2013.

Miller, Vern. *Letter to Debbie Treadway, Native American Heritage Commission in RE: Redevelopment project in Pleasanton, California.* Dated March 1, 2013.

Pilas-Treadway, Debbie. *Letter to Vern Miller, AEM Consulting in RE: Redevelopment Project in Pleasanton, Alameda County.* Native American Heritage Commission. Dated March 15, 2013.

Thiemann, Kelly M. *Letter to Native American Tribes (various).* Dated March 19, 2013.

An Architectural Survey for the Kottinger Senior Housing Project Pleasanton, Alameda County, California

Vicki R. Beard, M.A.

March 29, 2013

An Architectural Survey for the Kottinger Senior Housing Project Pleasanton, Alameda County, California

Prepared by:

Vicki R. Beard, M.A.

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Prepared for:

Cinnamon Crake
AEM Consulting
310 Pacific Heights Drive
Santa Rosa, California 95403

March 29, 2013

ABSTRACT

Tom Origer & Associates conducted an architectural survey for the Kottinger Place and Pleasanton Gardens Affordable Senior Housing Project in Pleasanton, Alameda County, California. This study was requested by Cinnamon Crake of AEM Consulting, and complies with Section 106 of the National Historic Preservation Act. Pursuant to Section 106, study included archival research at the Northwest Information Center, Rohnert Park (NWIC 12-0836), examination of the library and files of Tom Origer & Associates, and an examination of buildings within the project's area of potential effects (APE).

The proposed project includes demolishing existing apartments on two parcels and a clubhouse on a third parcel. New housing will then be constructed on four parcels on Kottinger Drive and Vineyard Avenue. Parcels where construction is proposed are:

Kottinger Place	240 Kottinger Drive	094-0095-033-03
Pleasanton Gardens	251 Kottinger Drive	094-0019-017
Vacant Parcel	4136 Vineyard Avenue	094-0095-034
Regalia House	4153 Regalia Court	part of 094-0095-017

The project's APE for historic architecture includes the project parcels and all adjacent parcels. Building within the APE were examined and photographed during the study, and assessments were made regarding their potential for inclusion in the National Register of Historic Places. Documentation pertaining to this study is on file at the offices of Tom Origer & Associates (File No. 13-026).

Synopsis

Project:	Kottinger Place and Pleasanton Gardens Affordable Senior Housing
Location:	Kottinger Drive and Vineyard Avenue, Pleasanton, Alameda County, California
APN:	APN 094-0095-033-03, 094-0019-017, 094-0095-034, part of 094-0095-017
Quadrangles:	Livermore 7.5' series
Study Type:	Assessment of buildings within the project APE
Scope:	Four project parcels and 27 adjacent parcels
Finds:	No adverse affects to historic properties

Project Personnel

This report was prepared by Vicki R. Beard, who has been with Tom Origer & Associates since 1990. Ms. Beard holds a Master of Arts in cultural resources management with an emphasis in historical resources, and meets the Secretary of the Interior's standards for archaeology, history, and architectural history. Graduate coursework and applied studies included building and structure evaluation, and historical research. Post-graduate work has been completed in historical architecture through the Architecture Department at the University of California Berkeley; heritage resource management at the University of Nevada, Reno; and architectural history and historic landscapes through the National Preservation Institute, Alexandria, Virginia. Professional affiliations include the Society of Architectural Historians, Northern California Chapter of the Society of Architectural Historians, and Vernacular Architecture Forum. She is also listed on the Register of Professional Archaeologists.

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INTRODUCTION

This report describes an architectural survey conducted for the Kottinger Place and Pleasanton Gardens Affordable Senior Housing Project in Pleasanton, Alameda County, California (Figure 1). The proposed project includes demolishing existing apartments on two parcels and a clubhouse on a third parcel. New housing will then be constructed on four parcels on Kottinger Drive and Vineyard Avenue (APN 094-0095-033-03, 094-0019-017, 094-0095-034, part of 094-0095-017). The study was requested by Cinnamon Crake of AEM Consulting, and complies with Section 106 of the National Historic Preservation Act. Documentation pertaining to this study is on file at Tom Origer & Associates (File No. 13-026).

REGULATORY CONTEXT

Under Section 106, when a federal agency is involved in an undertaking, it must take into account the effects of the undertaking on historic properties (36CFR Part 800). Compliance with Section 106 requires that agencies make an effort to identify historic properties that might be affected by a project, and gather information to evaluate their eligibility for inclusion in the National Register of Historic Places (National Register). Pursuant to Section 106, the goals of this study were to: 1) identify potentially important buildings and structures within the project's area of potential effects (APE) for historic architecture; 2) offer a preliminary evaluation of the significance of identified resources; 3) determine resource vulnerability to adverse impacts that could arise from project activities; and 4) offer recommendations designed to protect historical resource values, as warranted.

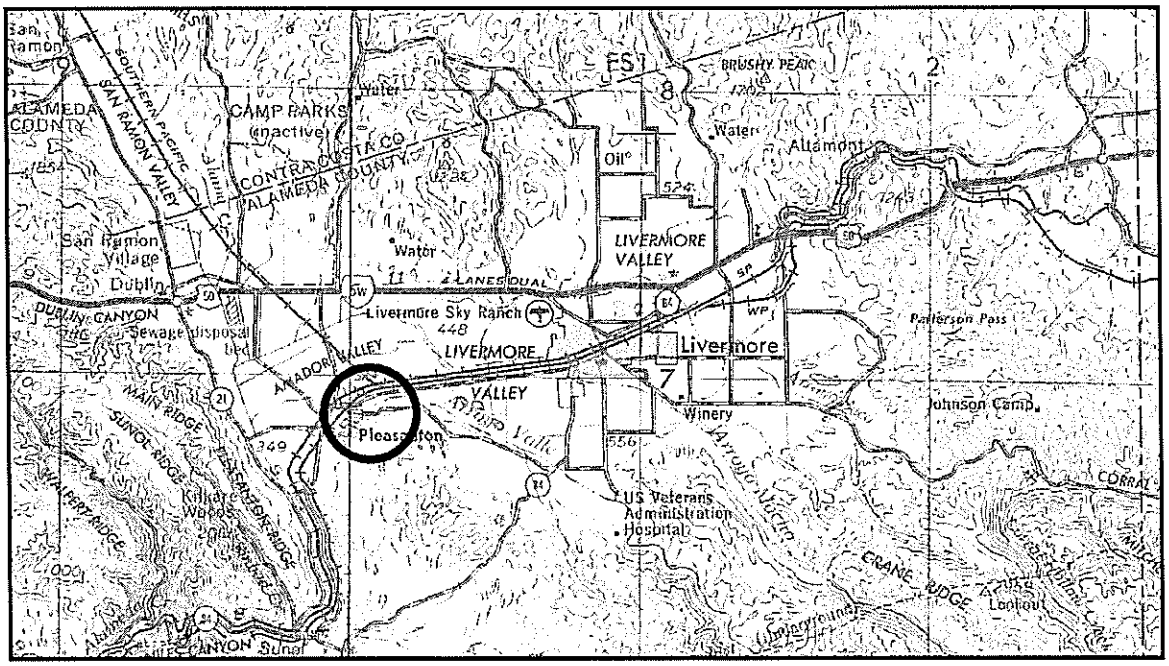

Figure 1. Project vicinity (adapted from the USGS 1962 San Jose 1:250,000-scale map).

Resource Definitions

The National Register defines an historic property as a district, site, building, structure, or object significant in American history, architecture, engineering, archaeology, and culture, and that may be of value to the nation as a whole or important only to the community in which it is located. These resource types are described by the National Park Service (NPS) as follows (NPS 1995:4-5).

> **Site.** A site is the location of a significant event, a prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself possesses historic, cultural, or archaeological value regardless of the value of any existing structure.
>
> **Building.** A building, such as a house, barn, church, hotel, or similar construction, is created principally to shelter any form of human activity. "Building" may also be used to refer to a historically and functionally related unit, such as a courthouse and jail, or a house and barn.
>
> **Structure.** The term "structure" is used to distinguish from buildings those functional constructions made usually for purposes other than creat-ing human shelter.
>
> **Object.** The term "object" is used to distinguish from buildings and structures those constructions that are primarily artistic in nature or are relatively small in scale and simply constructed. Although it may be, by nature or design, movable, an object is associated with a specific setting or environment.
>
> **District.** A district possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development.

Because the permitting process can be lengthy, the California Office of Historic Preservation (OHP) suggests that all resources over 45 years old be recorded for inclusion in the OHP filing system (OHP 1995:2), although professional judgment is urged in determining whether a resource warrants documentation.

Significance Criteria

The importance of a historic resource is evaluated in terms of National Register criteria put forth in 36CFR60.4, as follows:

> The quality of significance is present in properties that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:
>
> A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> B. That are associated with the lives of persons significant in our past; or
>
> C. That embody the distinct characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic

values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. That have yielded or may be likely to yield, information important in prehistory or history.

In addition to meeting one or more of the above criteria, eligibility for the National Register requires that a resource retain sufficient integrity to convey a sense of its significance or importance. Seven elements are considered key in considering a property's integrity: location, design, setting, materials, workmanship, feeling, and association.

PROJECT SETTING

Location and Description

The proposed project is located in central Alameda County, in the city of Pleasanton, as shown on the Livermore 7.5' USGS topographic quadrangle (Figure 2). The project area consists of four parcels, including:

Kottinger Place	240 Kottinger Drive	094-0095-033-03
Pleasanton Gardens	251 Kottinger Drive	094-0019-017
Vacant Parcel	4136 Vineyard Avenue	094-0095-034
Regalia House	4153 Regalia Court	part of 094-0095-017

There are 27 parcels adjacent to the four project parcels. Together, they form the area of potential effects (APE) for historic architecture (Figure 3). Parcels within APE are a mix of multi- and single-family residential properties and limited undeveloped areas.

The APE lies on the southeast edge of Pleasanton, and is shown in the 1878 county atlas as being part of part of John W. Kottinger's 2625-acre holdings. Kottinger, an Austrian immigrant came to the area in 1851 and acquired thousands of acres of land through his marriage to Maria Bernal. In 1867, Kottinger had a survey made of a portion of his land for the town of Pleasanton (Munro-Fraser 1883:478). Kottinger's adobe and barn were not located near the APE. At the beginning of the 20th century, the Kottinger family subdivided a large tract of land on the east side of town that including the APE (Nusbaumer and Boardman 1900). By 1904, the development of Kottinger's Pleasanton Homesteads was well under way along the streets comprising the APE, as evidenced by the 1906 USGS map for which the survey was completed in 1904.

Pleasanton's population increased greatly during World War II due to nearby military installations such as Camp Parks, and a housing shortage ensued. In response, the Navy Department constructed Kottinger Village, a housing developed located between Vineyard Avenue and Kottinger Drive (Architectural Resources Group, Inc. 2012). Buildings associated with Kottinger Village were removed when Kottinger Place was constructed in 1973, with the possible exception of the clubhouse at the intersection of Vineyard Avenue and Regalia Court.

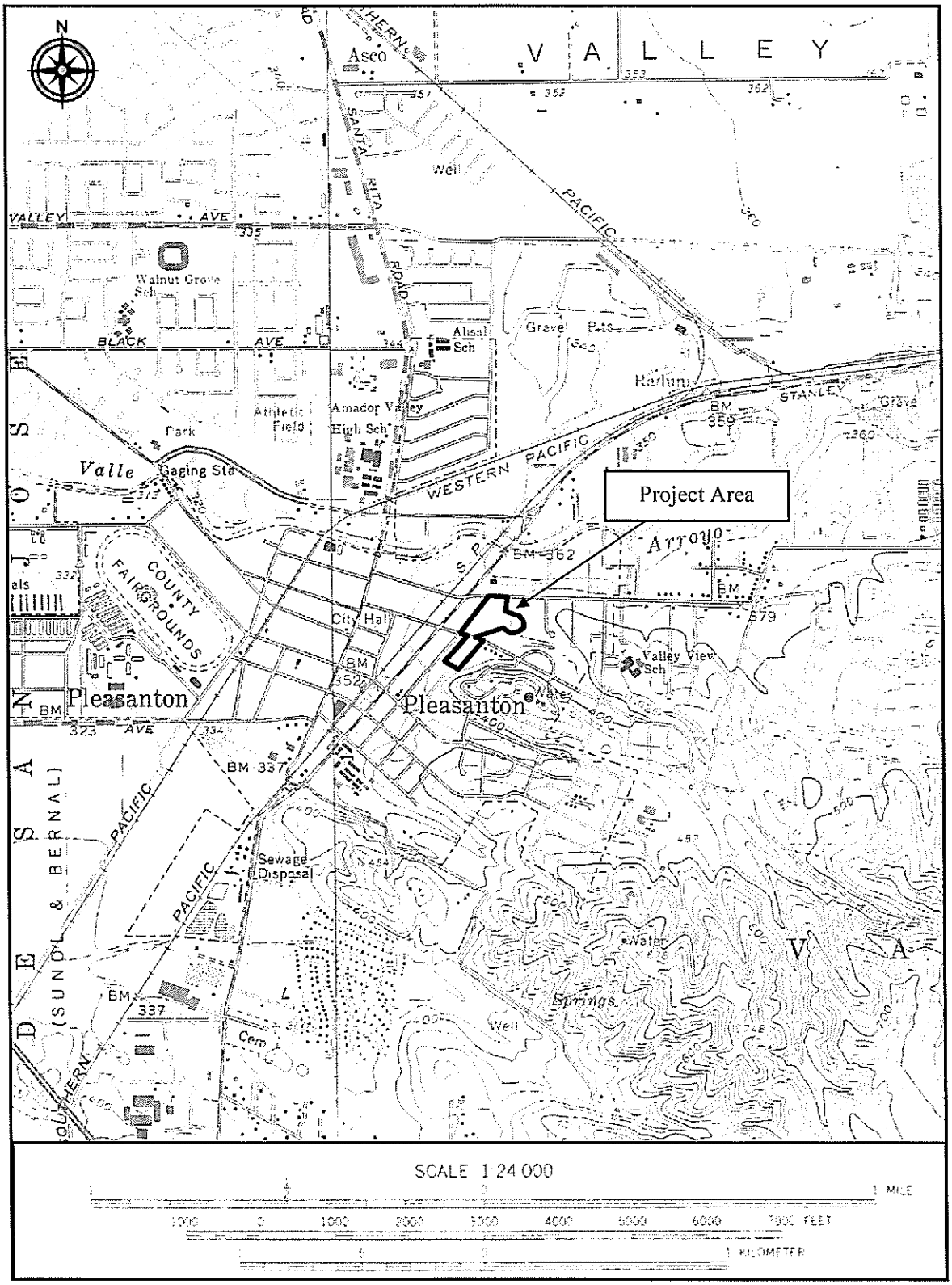

Figure 2. Study Location (adapted from the USGS 1980 Dublin and Livermore 7.5' maps).

STUDY PROCEDURES

Archival Study Procedures

A search was made of archival resources on file at the Northwest Information Center (NWIC), Sonoma State University, Rohnert Park (NWIC File No. 12-0836), the offices of Tom Origer & Associates, and various online databases to determine if the APE contained resources recognized by federal, state, or local entities. Sources of information included but were not limited to the current listings of properties in the National Register of Historic Places (National Register), California Historical Landmarks, California Register of Historical Resources (California Register), and California Points of Historical Interest as listed in the Office of Historic Preservation's *Historic Property Directory* (OHP 2012). Sources reviewed are listed in the "Materials Consulted" section of this report.

Archival research also included an examination of historical maps to gain insight into the nature and extent of historical development in the general vicinity, and especially within the APE. Maps ranged from hand-drawn maps of the 1800s (e.g., GLO) to topographic maps issued by the United States Army Corps of Engineers and United States Geological Survey (USGS).

Archival Study Results

Archival research found no buildings or structures within the APE that are listed on federal, state, or local registers (Alameda County 2011; OHP 2013). Review of historical maps found no evidence of buildings or structures within or near the APE before 1904 when the USGS mapped the area (GLO 1863; Higley 1857; Thompson & West 1878; USGS 1906). By 1904, there were several houses within the APE, and by 1951, The Kottinger Village housing development had been constructed between Vineyard Avenue and Kottinger Drive (USGS 1906, 1951).

Field Survey Procedures

On March 15, 2013, a survey was made of buildings within the APE to identify possible historic properties that could be affected by the project. Photographs were taken of these buildings and note was made of their age, potential importance, and level of integrity. Table 1 summarizes information regarding adjacent parcels, and Figure 3 shows parcel locations.

Field Survey Results

Project Parcels

The project encompasses three existing and one planned parcel shown on the APE map as parcels A through D. Brief descriptions of these parcels are provided below.

Parcel A contains Kottinger Place, a housing complex constructed in 1973. This complex is less than 50 years old. While the National Register program provides for the inclusion of properties younger than 50 years they must be of exceptional importance. This property does not meet that standard.

Parcel B is a vacant parcel.

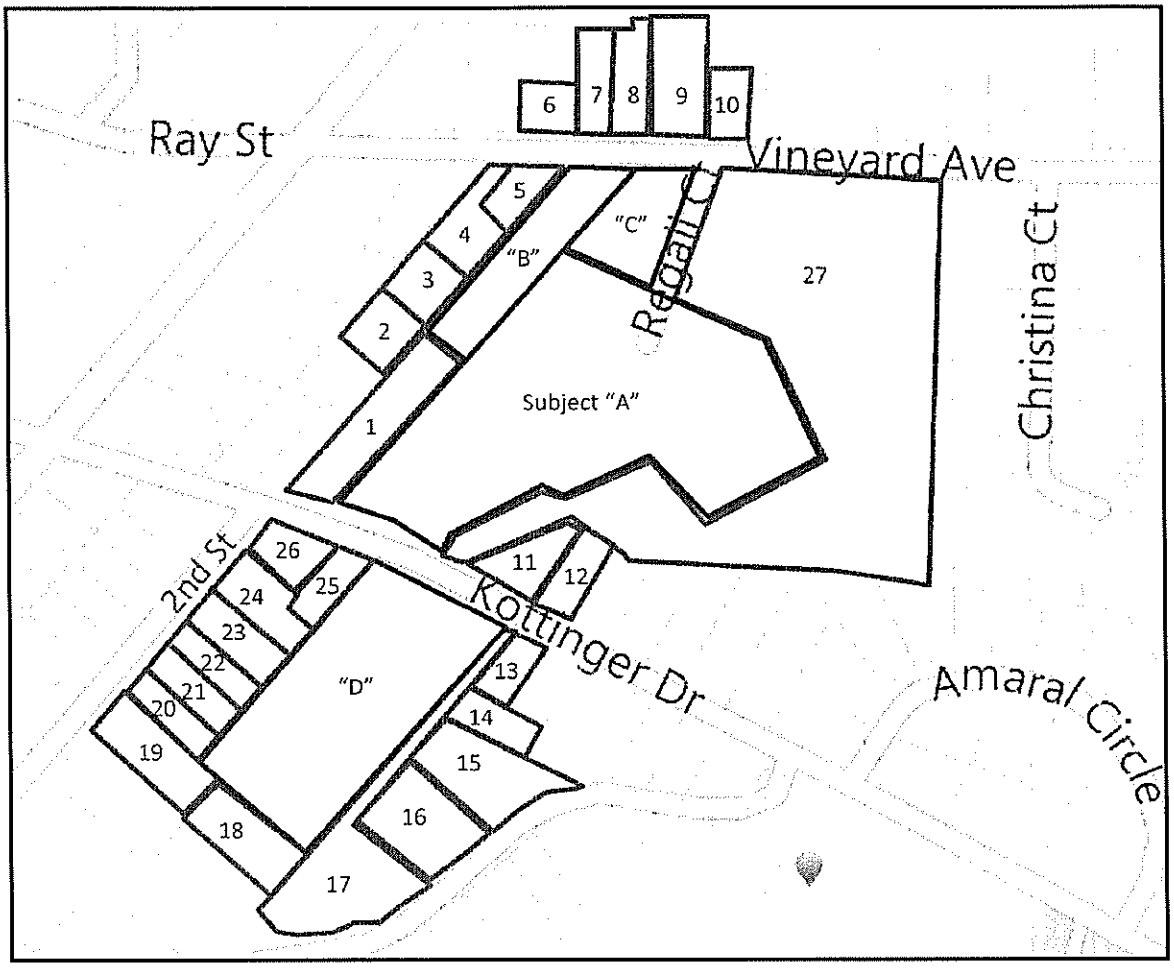

Figure 3. Area of Potential Effects (after AEM Consulting 2013).

Parcel C contains the city-owned Pleasanton Women's Club/Regalia House. This clubhouse appears to be a mid-20th century building, and was probably part of the earlier Kottinger Village complex. The USGS 1951 map of this area depicts the earlier development and a building is shown at the location of the clubhouse. This building is a rectangular, frame structure with a slightly peaked, gabled roof. The entry is on the east side of the building and is a simple stoop with a shed roof. Cladding is stucco. Windows are primarily two-light, wood-sashed, sliding windows topped by a band of fixed windows. Cladding is stucco. This building is unlikely to meet the eligibility criteria for inclusion in the National Register.

Parcel D contains the Pleasanton Gardens housing complex constructed in 1969. This complex is less than 50 years old and does not meet the "exceptionally important" standard required for inclusion in the National Register.

Adjacent Parcels

As shown in Figure 3, the project area is adjacent to 27 other parcels. Parcels 1, 10, 15, 16, 18, and 24 contain buildings less than 50 years old and will not be discussed further.

Table 1. Summary of Parcel within and Adjacent to the Project Area

Map No.	Address	APN	Description	Date[1]
A	240 Kottinger Dr	094-0095-033-03	Housing complex (Kottinger Place)	1973[2]
B	4138 Vineyard Ave	094-0095-017	Vacant	NA
C	4153 Regalia Ct	094-0095-034[3]	Clubhouse (Regalia House)	c.1950
D	251 Kottinger Dr	094-0019-017	Housing complex (Pleasanton Gardens)	1969[2]
1	228 Kottinger Dr	094-0095-048	Residential	1999
2	4162 Vineyard Ave	094-0095-021	Residential	1963
3	4160 Vineyard Ave	094-0095-020	Residential	1963
4	4158 Vineyard Ave	094-0095-042	Residential	1963
5	4156 Vineyard Ave	094-0095-041	Residential	1910
6	4149 Vineyard Ave	094-0095-007	Residential	1951
7	4141 Vineyard Ave	094-0095-008	Residential	1900
8	4143 Vineyard Ave	094-0095-009-02	Residential	1962
9	4095 Vineyard Ave	094-0095-012	Residential	c. 1960
10	4089 Vineyard Ave	094-0095-043	Residential	1992
11	266 Kottinger Dr	094-0095-035	Residential	1954
12	278 Kottinger Dr	094-0095-036	Residential	1954
13	271 Kottinger Dr	094-0019-020	Residential	1953
14	269 Kottinger Dr	094-0019-019	Residential	1954
15	265 Kottinger Dr	094-0019-030	Residential	1977
16	259 Kottinger Dr	094-0019-031	Residential	1977
17	255 Kottinger Dr	094-0019-032	Residential	1959
18	4354 2nd St	094-0019-035	Residential	1979
19	4348 2nd St	094-0019-034	Residential	1910
20	4340 2nd St	094-0019-010	Residential	1911
21	4332 2nd St	094-0019-011	Residential	1951
22	4326 2nd St	094-0019-012	Residential	1890
23	4318 2nd St	094-0019-013	Residential	1928
24	4310 2nd St	094-0019-014-01	Residential	2007
25	229 Kottinger Dr	094-0019-016-01	Residential	1890
26	4304 2nd St	094-0019-015	Residential	1890
27	4136 Vineyard Dr	094-0095-034	Kottinger Park	NA

[1] construction dates from parcelquest.com except where noted
[2] from City of Pleasanton 2011
[3] Parcel C is part of Parcel 27 at present

Parcels 2, 3, and 4 are situated on a private street off of Vineyard Avenue and contain duplexes built in 1963 using identical plans. All are frame buildings with stucco siding and aluminum-sashed windows. These Ranch-style dwellings have low, hipped-roofs and long, rectangular footprints. They are not architecturally distinctive and are not likely to meet National Register eligibility criteria.

Parcel 5 has a 1910, Spanish Eclectic dwelling with a flat, parapetted roof. The front of the house features large, arched windows that mimic the arched entryway. Wings extend from the core of the house and have small courtyards enclosed by high walls. This house could be eligible for the National Register if formally evaluated.

The single-family residence on Parcel 6 is a Ranch-style building constructed in 1962. It is a frame structure clad with stucco, and has a hipped roof. At present the windows are double-hung, vinyl-clad sashes. It appears that this house was a duplex (similar to those on Parcels 2 through 4) that has been renovated. One of the two central garages has been enclosed and the wall plan on the east end extended to match the front edge of the garage. The roof has been reconfigured to account for the added space. This building is unlikely to meet the eligibility criteria for inclusion in the National Register.

Parcel 7 has a small, front-gabled frame building with a hipped roof stoop. At present the building has vinyl-clad windows and is clad with stucco. This building is unlikely to meet the eligibility criteria for inclusion in the National Register.

Parcel 8 contains a front-gabled, frame dwelling with wood panel siding. The entryway has a simple stoop with a separate gabled roof. Windows are aluminum-sashed fixed and sliding windows. County records indicate that it was constructed in 1951. This building is unlikely to meet the eligibility criteria for inclusion in the National Register.

Parcel 9 has a two-story apartment complex constructed circa 1960. This building has a rectangular plan with an end-gabled roof. Windows are aluminum and vinyl-sashed. This building is unlikely to meet the eligibility criteria for inclusion in the National Register.

The dwellings on Parcels 11 through 14 were constructed in the early 1950s as part of the post-war building boom. Most are modest, one-story, frame structures with low-pitched gabled roofs. Cladding includes a mix of lapped boards and stucco with brick or faux stone trim. The exception is the two-story home on Parcel 14 that appears to have been renovated in recent years. These buildings are unlikely to meet the eligibility criteria for inclusion in the National Register.

The house on Parcel 17 is a 1959, gable-roofed, frame building with vertical boards and battens cladding the lower part of the house and lapped siding in the gables. This is not an architecturally distinctive building and is unlikely to meet the eligibility criteria for inclusion in the National Register.

Parcels 19 through 26 face 2nd Street and their construction dates range from the late-19th to the mid-20th century. The house on Parcel 19 is a Craftsman home constructed in 1910. It features a gabled roof with a separate gabled roof over the front porch. Decorative brackets are at the gable ends. Porch supports are simple wood columns with brick bases. Windows at the front of the house appear to have been changed to large-paned fixed windows. This building is unlikely to meet the eligibility criteria for inclusion in the National Register.

Parcel 20 has a very modest, hipped roof dwelling with no real ornamentation. The exterior is stucco and the windows are newer, vinyl-clad sashes. This building is unlikely to meet the eligibility criteria for inclusion in the National Register.

Parcel 21 contains a 1951, frame house on a rectangular plan. The roof is cross-hipped and the exterior has lapped siding with brick trim. This building is unlikely to meet the eligibility criteria for inclusion in the National Register.

County records indicate that the house on Parcel 22 was constructed in 1890; however, its Tudor style suggests that it is from the 1920s or 30s. This house has a steeply pitched, gabled roof with cross gables and gabled dormers. Cladding is stucco. Windows at the front of the house are large, fixed panes. Elsewhere they are one-over-one double-hung sashes. The garage at the rear of the parcel mimics the style of the house. If the county's construction date for this house is correct, it has been modified extensively and it is unlikely to meet the eligibility criteria for inclusion in the National Register.

The house on Parcel 23 is a hipped-roof, Craftsman home with a full-width porch beneath the principal roof. Porch supports are tapered columns. The windows at the front of the house are typical Craftsman-style windows with multiple panes in the upper sash and a single pane in the lower. This house is not an especially good example of the Craftsman style and is unlikely to meet the eligibility criteria for inclusion in the National Register.

The buildings on Parcels 25 and 26 are vernacular homes built in 1890. Both were built on a hall-and-parlor plan with side-gabled roofs that extend low over the front porch. The house on Parcel 25 appears to have been raised to accommodate a sub-ground space, possibly a basement. Craftsman-style, tapered porch supports have been added to the front porch. At present, it is clad with stucco and the windows are vinyl, double-hung sashes. This building is highly modified and is unlikely to meet the eligibility criteria for inclusion in the National Register.

In contrast to the house on Parcel 25, the hall-and-parlor home on Parcel 26 appears little changed except for an addition at the rear. The original part of the house retains its cove-rustic, drop siding and six-over-six, double-hung windows. The front of the house has a shed roof supported by simple posts over the full-width stoop. This is one of the early buildings constructed in this area. It retains good integrity and is likely to meet the criteria for inclusion in the National Register.

Parcel 27 is Kottinger Village Park, which was part of the Kottinger Village housing development of the 1940s; however, there are no surviving elements from that time.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

A survey of buildings on and surrounding the proposed project found that most would not be eligible for inclusion in the National Register; however, Parcels 5 and 26 contain buildings that could be found eligible if formal evaluations were completed. The house on Parcel 5 is a good and early example of Spanish Eclectic architecture. The hall-and-parlor home on Parcel 26 is one of the earliest houses built in this area and it retains good historical integrity.

In assessing potential project effects on these properties, we considered existing conditions, proposed conditions, and the proximity of the project to the two potentially eligible buildings. At present, both homes are in areas of high development with surrounding buildings that compromise the integrity of their settings. Removing the existing housing complexes and building new structures on those sites will not further affect their National Register eligibility.

Recommendations

Although two buildings were found within the APE that could be eligible for the National Register, it is our opinion that the proposed project will not alter their potential eligibility. No further study is recommended at this time.

SUMMARY

This study was completed at the request of Cinnamon Crake of AEM Consulting for an affordable senior housing project on Kottinger Drive and Vineyard Avenue in Pleasanton. The study was conducted in compliance with Section 106 of the National Historic Preservation Act and included archival research and survey of buildings within the project's APE.

Of the four project parcels and 27 adjacent parcels that form the APE, two parcels were found to contain buildings that could be eligible for inclusion in the National Register. In our opinion, the potential eligibility of those buildings will not be affected by the proposed project because of the extent of development that currently exists. No further study was recommended.

MATERIALS CONSULTED

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2011 Alameda County Landmarks & Contributing Buildings Identified in 2005-2008 Comprehensive Survey. < http://www.acgov.org/cda/planning/landuseprojects/documents/phrcList.pdf>.

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1951 Livermore, California. 15' map series. Geological Survey, Washington, D.C.

Tom Origer & Associates
Archaeology / Historical Research

March 29, 2013

Cinnamon Crake
AEM Consulting
310 Pacific Heights Drive
Santa Rosa, California 95403

Re: Archival Search Results Kottinger Affordable Senior Homes, Pleasanton, Alameda County

Dear Ms. Crake:

At your request, we completed a search of the archaeological base maps, site records, and survey reports on file at the Northwest Information Center (NWIC), Sonoma State University, for the for the Kottinger Affordable Senior Homes, Pleasanton, Alameda County. In addition, we checked documents and maps pertinent to this project that are on file at our offices.

Archival Review
The NWIC search (File No. 12-0836) found that there had been no previous survey of the project area, and that there are known resources within a one-mile radius.

Ethnographic Review
At the time of European settlement, the study area was situated in territory controlled by the Chochenyo, a branch of the Ohlone (Costanoan) tribal groups (Kroeber 1925; Levy 1978). The Ohlone were hunter-gatherers who lived in rich environments that allowed for dense populations with complex social structures (Kroeber 1925). They settled in large, permanent villages about which were distributed seasonal camps and task-specific sites. Primary village sites were occupied throughout the year and other sites were visited in order to procure particular resources that were especially abundant or available only during certain seasons. Sites often were situated near fresh water sources and in ecotones where plant life and animal life were diverse and abundant. For more information about the Ohlone/Costanoan see Bean (1994), Kroeber (1925), Levy (1978), Margolin (1978), and Teixeira (1997).

No ethnographic sites are reported within or near the study area.

Historical Review
Review of historical maps found no evidence of buildings or structures within or near the APE before 1904 when the USGS mapped the area (GLO 1863; Higley 1857; Thompson & West 1878; USGS 1906). By 1904, there were several houses within the APE, and by 1951, The Kottinger Village housing development had been constructed between Vineyard Avenue and Kottinger Drive (USGS 1906, 1951).

P.O. Box 1531, Rohnert Park, California 94927 ♦ Phone (707) 584-8200 Fax (707) 584-8300

Please contact us if you have any questions or need additional information. An invoice for the record search is enclosed.

Sincerely,

Vicki Beard
Senior Associate

Material Consulted

Alameda County
2011 Alameda County Landmarks & Contributing Buildings Identified in 2005-2008 Comprehensive Survey. < http://www.acgov.org/cda/planning/landuseprojects/documents/phrcList.pdf>.

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Views of Entrance from Vineyard Avenue

Existing

Proposed

Existing

Proposed

View from Vineyard Avenue Neighbors

Existing

Proposed

View from Kottinger Park

Existing

Proposed

View from Kottinger Drive Neighbors

Existing

Proposed

View from Kottinger Drive

Existing

Proposed

View of Entrance to Pleasanton Gardens

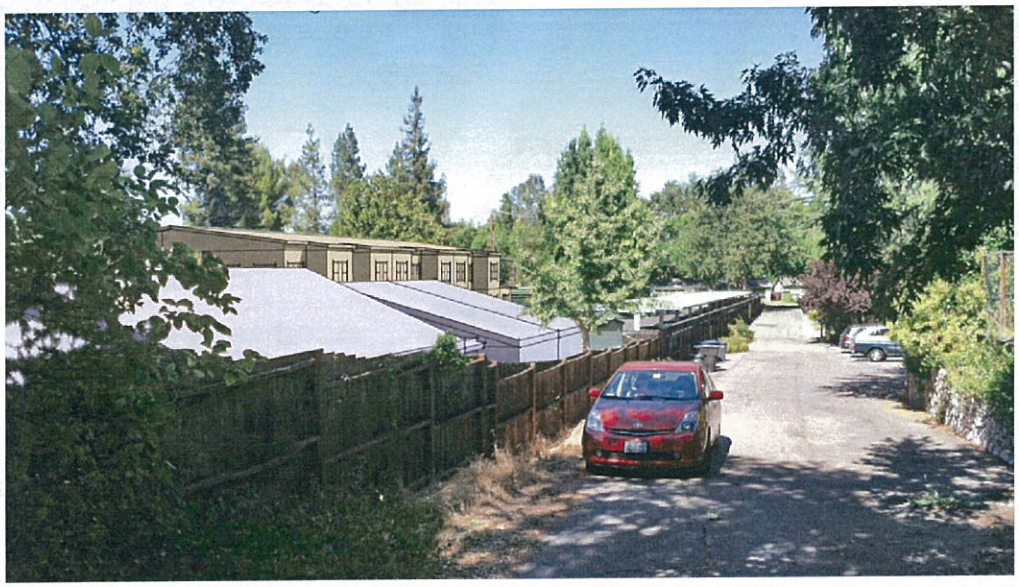
Existing

Proposed

View from Adjacent Neighbors

Existing

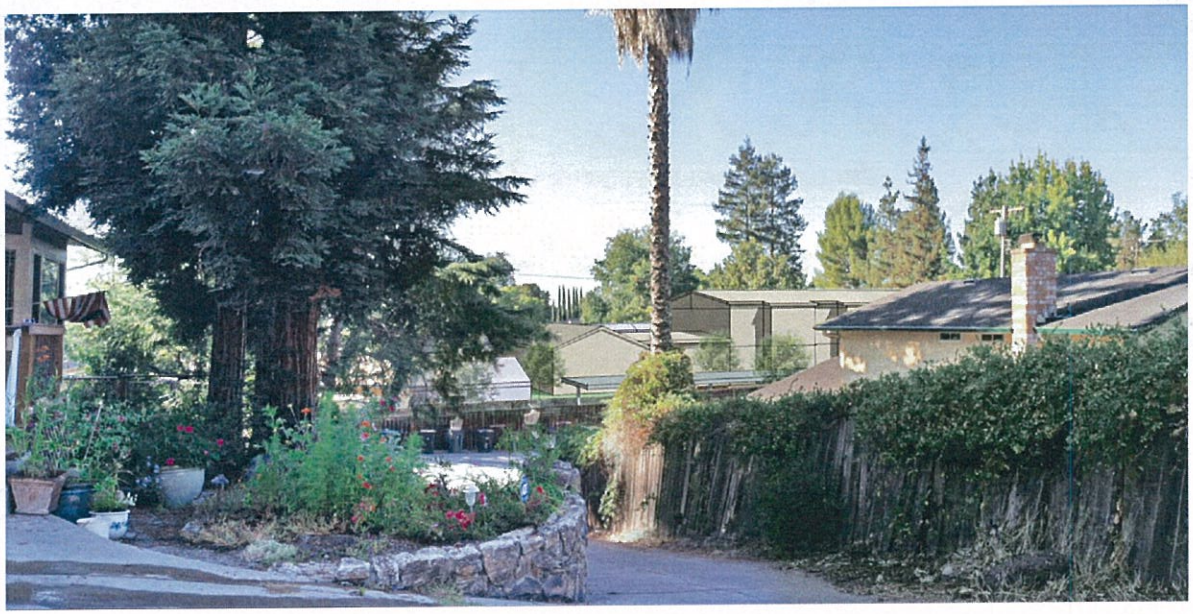
Proposed



View from Adjacent Neighbors

Existing

Proposed



View from Second Street Neighbors

Existing

Proposed

Appendix A

When To Consult With Tribes Under Section 106

Section 106 requires consultation with federally-recognized Indian tribes when a project may affect a historic property of religious and cultural significance to the tribe. Historic properties of religious and cultural significance include: archeological sites, burial grounds, sacred landscapes or features, ceremonial areas, traditional cultural places, traditional cultural landscapes, plant and animal communities, and buildings and structures with significant tribal association. The types of activities that may affect historic properties of religious and cultural significance include: ground disturbance (digging), new construction in undeveloped natural areas, introduction of incongruent visual, audible, or atmospheric changes, work on a building with significant tribal association, and transfer, lease or sale of properties of the types listed above.

If a project includes any of the types of activities below, invite tribes to consult:

- ✓ **significant ground disturbance (digging)**
  Examples: new sewer lines, utility lines (above and below ground), foundations, footings, grading, access roads

- ☐ **new construction in undeveloped natural areas**
  Examples: industrial-scale energy facilities, transmission lines, pipelines, or new recreational facilities, in undeveloped natural areas like mountaintops, canyons, islands, forests, native grasslands, etc., and housing, commercial, and industrial facilities in such areas

- ☐ **incongruent visual changes**
  Examples: construction of a focal point that is out of character with the surrounding natural area, impairment of the vista or viewshed from an observation point in the natural landscape, or impairment of the recognized historic scenic qualities of an area

- ☐ **incongruent audible changes**
  Examples: increase in noise levels above an acceptable standard in areas known for their quiet, contemplative experience

- ☐ **incongruent atmospheric changes**
  Examples: introduction of lights that create skyglow in an area with a dark night sky

- ☐ **work on a building with significant tribal association**
  Examples: rehabilitation, demolition or removal of a surviving ancient tribal structure or village, or a building or structure that there is reason to believe was the location of a significant tribal event, home of an important person, or that served as a tribal school or community hall

- ☐ **transfer, lease or sale of a historic property of religious and cultural significance**
  Example: transfer, lease or sale of properties that contain archeological sites, burial grounds, sacred landscapes or features, ceremonial areas, plant and animal communities, or buildings and structures with significant tribal association

- ☐ **None of the above apply**

Kottinger Senior Housing, Pleasanton, CA _____ _____

Project **Reviewed By** **Date**

Tribal Directory Assessment Information

Contact Information for Tribes of Alameda County, California

1

	Tribal Name	County Name
1		

AEM CONSULTING

Planning, Public Policy & Environmental Studies

March 1, 2013

Debbie Treadway
Native American Heritage Commission
915 Capitol Mall
Sacramento, CA 95814-4801

Dear Ms. Treadway:

Our firm is conducting a cultural resources evaluation for a redevelopment project in Pleasanton, Alameda County, California. We are seeking information from the Native American Heritage Commission regarding possible sacred lands and other cultural sites within the project area. We would also like to obtain a list of individuals whom it would be appropriate to contact regarding this project.

County:	Alameda County
USGS Map:	Livermore 7.5' Quadrangle
Township:	T - 3 S
Range:	R - 1 E
Section:	21

MidPen Housing Corp. proposes to develop a total of 172-189 affordable senior housing apartments on Kottinger Place located on Kottinger Drive and Vineyard Avenue in Pleasanton, California. The project involves the demolition of the existing apartments and new construction of Kottinger Place and Pleasanton Gardens Affordable Senior Apartments.

The subject property consists of two city-owned senior housing developments, a vacant lot and a city owned building. The site is located on the north and south sides of Kottinger Drive in a mixed commercial and residential area of Pleasanton, California. The property totals approximately 5.9 acres and is improved with 29 one-story buildings totaling approximately 54,300 square feet. The subject property is currently occupied by a city owned building (Regalia House), Kottinger Place senior apartments (50 units), Pleasanton Gardens senior apartments (40 units) and a vacant lot. In addition to the subject property buildings, the property is improved with tenant garden areas, asphalt-paved parking areas and associated landscaping.

Details:

240 Kottinger Drive, Pleasanton, CA 94566 (APN 094-0095-033-03) – Kottinger Place (50 units)

251 Kottinger Drive, Pleasanton, CA 94566 (APN 094-0019-017) – Pleasanton Gardens (40 units)

4136 Vineyard Avenue, Pleasanton, CA 94566 (APN 094-0095-034) – Vacant Parcel

4153 Regalia Court (aka 4138 Vineyard Avenue), Pleasanton CA 94566 (Parcel to be divided – currently part of Kottinger Park APN 094-0095-017) – "Regalia House" (city-owned facility)

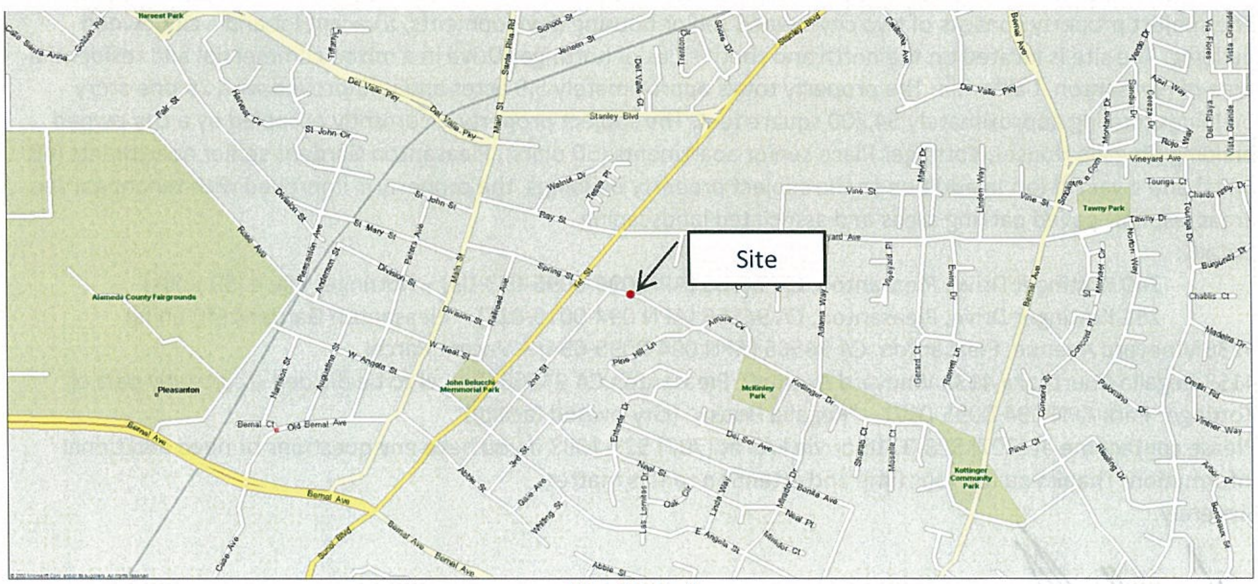
Please contact me at (707) 523-3710 or via FAX at (707) 523-1033 if you have any questions or need additional information. Thank you for your time and attention to this matter.

Sincerely,

Vern Miller
Vern Miller, Principal, AEM Consulting

Locator Maps
Kottinger Senior Housing, Pleasanton, Alameda County, California

Map 1 Region



Map 2 Detail

Figure 1 Site Plan

Figure 2 Aerial View of site and Vicinity

STATE OF CALIFORNIA Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390

March 15, 2013

Vern Miller
AEM
310 Pacific Heights Drive
Santa Rosa, CA 95403

Sent by Fax: 707-523-1033
Number of Pages: 2

Re: Redevelopment Project in Pleasanton, Alameda County

Dear Ms. Miller:

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 653-4038.

Sincerely,

Debbie Pilas-Treadway
Environmental Specialist III

Native American Contacts
Alameda County
March 13, 2013

Jakki Kehl
720 North 2nd Street
Patterson , CA 95363
(209) 892-1060

Ohlone/Costanoan

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28
Hollister , CA 95024
ams@indiancanyon.org
831-637-4238

Ohlone/Costanoan

Katherine Erolinda Perez
PO Box 717
Linden , CA 95236
canutes@verizon.net
(209) 887-3415

Ohlone/Costanoan
Northern Valley Yokuts
Bay Miwok

Muwekma Ohlone Indian Tribe of the SF Bay Area
Rosemary Cambra, Chairperson
PO Box 360791
Milpitas , CA 95036
muwekma@muwekma.org
408-205-9714
510-581-5194

Ohlone / Costanoan

Amah/MutsunTribal Band
Irene Zwierlein, Chairperson
789 Canada Road
Woodside , CA 94062
(650) 851-7747 - Home
650-400-4806 cell preferred
(650) 851-7489 - Fax

Ohlone/Costanoan

The Ohlone Indian Tribe
Andrew Galvan
PO Box 3152
Fremont , CA 94539
chochenyo@AOL.com
(510) 882-0527 - Cell
(510) 687-9393 - Fax

Ohlone/Costanoan
Bay Miwok
Plains Miwok
Patwin

Amah/MutsunTribal Band
Jean-Marie Feyling
19350 Hunter Court
Redding , CA 96003
jmfgmc@sbcglobal.net
530-243-1633

Ohlone/Costanoan

Trina Marine Ruano Family
Ramona Garibay, Representative
30940 Watkins Street
Union City , CA 94587
510-972-0645-home

Ohlone/Costanoan
Bay Miwok
Plains Miwok
Patwin

Coastanoan Rumsen Carmel Tribe
Tony Cerda, Chairperson
240 E, 1st Street
Pomona , CA 91766
rumsen@aol.com
(909) 524-8041 Cell
909-629-6081

Ohlone/Costanoan

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Kottinger Project, Alameda County

ALAMEDA COUNTY COMMUNITY DEVELOPMENT AGENCY
HOUSING AND COMMUNITY DEVELOPMENT DEPARTMENT

Chris Bazar
Agency Director

hcd

Linda M. Gardner
Housing Director

224
W. Winton Avenue
room 108

Hayward
California
94544-1215

phone
510.670.5404
fax
510.670.6378
TTY
510.265.0253

www.
acgov.org/cda

March 19, 2013

Jakki Kehl
720 North 2nd Street
Patterson, CA 95363

In RE: 240 & 251 Kottinger Drive, 4136 Vineyard Avenue & 4153 Regalia Court, Pleasanton, CA
Project-Based Section 8 Vouchers

Dear Jakki Kehl,

Alameda County is considering funding the project listed above with federal funds from the U.S. Department of Housing and Urban Development (HUD). Under HUD regulation 24 CFR 58.4, Alameda County has assumed HUD's environmental review responsibilities for the project, including tribal consultation related to historic properties. Historic properties include archeological sites, burial grounds, sacred landscapes or features, ceremonial areas, traditional cultural places and landscapes, plant and animal communities, and buildings and structures with significant tribal association.

Alameda County will conduct a review of this project to comply with Section 106 of the National Historic Preservation Act and its implementing regulations 36 CFR Part 800. We would like to invite you to be a consulting party in this review to help identify historic properties in the project area that may have religious and cultural significance to your tribe, and if such properties exist, to help assess how the project might affect them. If the project might have an adverse effect, we would like to discuss possible ways to avoid, minimize or mitigate potential adverse effects.

To meet project timeframes, if you would like to be a consulting party on this project, can you please let us know of your interest within 30 days? If you have any initial concerns with impacts of the project on religious or cultural properties, can you please note them in your response?

Enclosed is a map that shows the project area and, if applicable, an additional area of potential indirect effects. The project consists of redevelopment of 90 existing units to 189 units of affordable senior housing at the four addresses below in Pleasanton, Alameda County, California. The project includes demolition of the existing 90 units of affordable senior housing known as Pleasanton Gardens, Kottinger Place and a city-owned building known as "Regalia House" and the new construction of 189 units on four parcels. One of the parcels is currently vacant; the parcel was purchased by the City of Pleasanton in 2005 and a single family home was subsequently demolished.

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More information on the Section 106 review process is available at http://www.comcon.org/sites/default/files/historic_preservation/ . HUD's process for tribal consultation under Section 106 is described in a Notice available at http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/environment/ates .

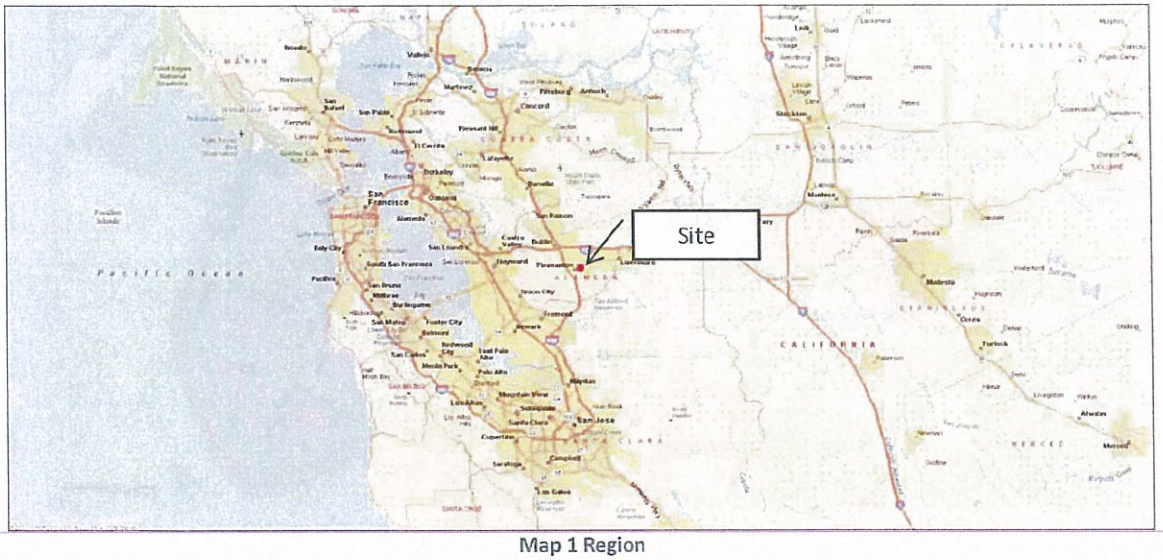
If you do not wish to consult on this project, can you please inform us? If you do wish to consult, can you please include in your reply the name and contact information for the tribe's principal representative in the consultation? Thank you very much. We value your assistance and look forward to consulting further if there are historic properties of religious and cultural significance to your tribe that may be affected by this project.

Sincerely,

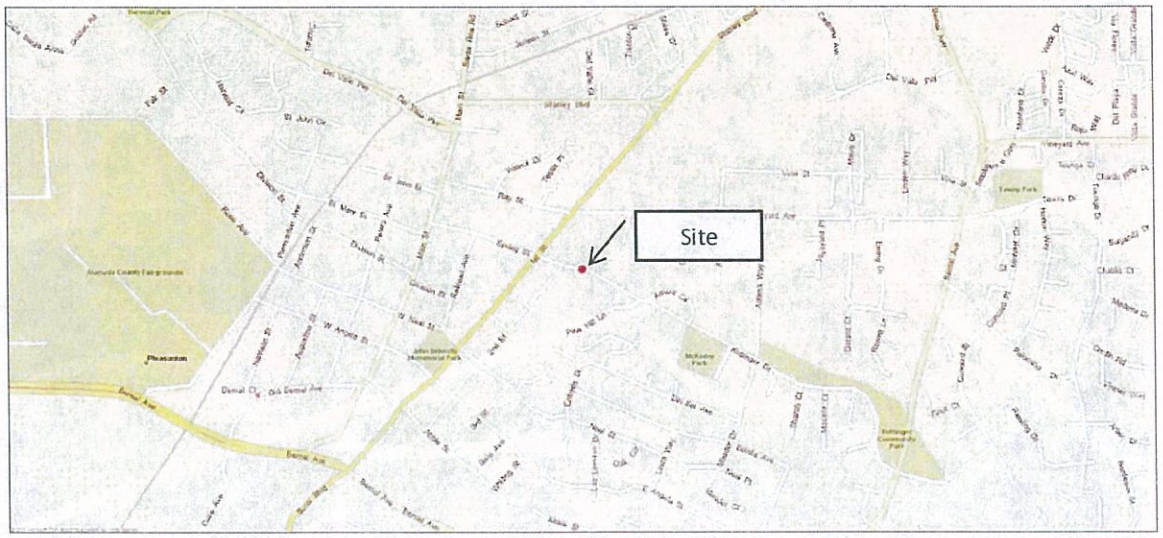
Kelly M. Thiemann
Housing and Community Development Manager
Phone: (510) 670-5280
Kelly.thiemann@acgov.org
FAX: (510) 670-6378

enclosures

Locator Maps
Kottinger Senior Housing, Pleasanton, Alameda County, California



Map 1 Region



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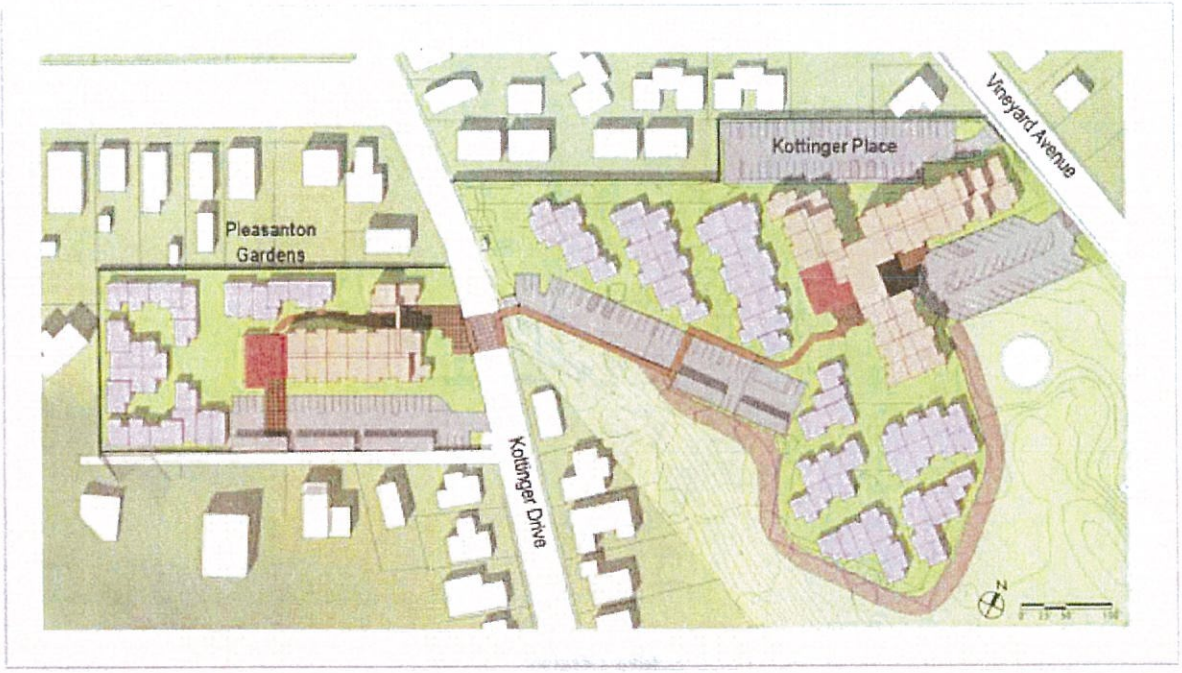

Figure 1 Site Plan

Figure 2 Aerial View of site and Vicinity

March 19, 2013

Katherine Erolinda Perez
P.O. Box 717
Linden, CA 95236

In RE: 240 & 251 Kottinger Drive, 4136 Vineyard Avenue & 4153 Regalia Court, Pleasanton, CA
Project-Based Section 8 Vouchers

Dear Ms. Perez,

Alameda County is considering funding the project listed above with federal funds from the U.S. Department of Housing and Urban Development (HUD). Under HUD regulation 24 CFR 58.4, Alameda County has assumed HUD's environmental review responsibilities for the project, including tribal consultation related to historic properties. Historic properties include archeological sites, burial grounds, sacred landscapes or features, ceremonial areas, traditional cultural places and landscapes, plant and animal communities, and buildings and structures with significant tribal association.

Alameda County will conduct a review of this project to comply with Section 106 of the National Historic Preservation Act and its implementing regulations 36 CFR Part 800. We would like to invite you to be a consulting party in this review to help identify historic properties in the project area that may have religious and cultural significance to your tribe, and if such properties exist, to help assess how the project might affect them. If the project might have an adverse effect, we would like to discuss possible ways to avoid, minimize or mitigate potential adverse effects.

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Sincerely,

Kelly M. Thiemann
Housing and Community Development Manager
Phone: (510) 670-5280
Kelly.thiemann@acgov.org
FAX: (510) 670-6378

enclosures

March 19, 2013

Amah/Mutsun Tribal Band
Irene Zwierlein, Chairperson
789 Canada Road
Woodside, CA 94062

In RE: 240 & 251 Kottinger Drive, 4136 Vineyard Avenue & 4153 Regalia Court, Pleasanton, CA
Project-Based Section 8 Vouchers

Dear Ms. Zwierlein,

Alameda County is considering funding the project listed above with federal funds from the U.S. Department of Housing and Urban Development (HUD). Under HUD regulation 24 CFR 58.4, Alameda County has assumed HUD's environmental review responsibilities for the project, including tribal consultation related to historic properties. Historic properties include archeological sites, burial grounds, sacred landscapes or features, ceremonial areas, traditional cultural places and landscapes, plant and animal communities, and buildings and structures with significant tribal association.

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Kelly M. Thiemann
Housing and Community Development Manager
Phone: (510) 670-5280
Kelly.thiemann@acgov.org
FAX: (510) 670-6378

enclosures

March 19, 2013

Amah/Mutsun Tribal Band
Jean-Marie Feyling
19350 Hunter Court
Redding, CA 96003

In RE: 240 & 251 Kottinger Drive, 4136 Vineyard Avenue & 4153 Regalia Court, Pleasanton, CA
Project-Based Section 8 Vouchers

Dear Ms. Feyling,

Alameda County is considering funding the project listed above with federal funds from the U.S. Department of Housing and Urban Development (HUD). Under HUD regulation 24 CFR 58.4, Alameda County has assumed HUD's environmental review responsibilities for the project, including tribal consultation related to historic properties. Historic properties include archeological sites, burial grounds, sacred landscapes or features, ceremonial areas, traditional cultural places and landscapes, plant and animal communities, and buildings and structures with significant tribal association.

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Sincerely,

Kelly M. Thiemann
Housing and Community Development Manager
Phone: (510) 670-5280
Kelly.thiemann@acgov.org
FAX: (510) 670-6378

enclosures

March 19, 2013

Coastanoan Rumsen Carmel Tribe
Tony Cerda, Chairperson
240 E. 1st Street
Pomona, CA 91766

In RE: 240 & 251 Kottinger Drive, 4136 Vineyard Avenue & 4153 Regalia Court, Pleasanton, CA
Project-Based Section 8 Vouchers

Dear Mr. Cerda,

Alameda County is considering funding the project listed above with federal funds from the U.S. Department of Housing and Urban Development (HUD). Under HUD regulation 24 CFR 58.4, Alameda County has assumed HUD's environmental review responsibilities for the project, including tribal consultation related to historic properties. Historic properties include archeological sites, burial grounds, sacred landscapes or features, ceremonial areas, traditional cultural places and landscapes, plant and animal communities, and buildings and structures with significant tribal association.

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If you do not wish to consult on this project, can you please inform us? If you do wish to consult, can you please include in your reply the name and contact information for the tribe's principal representative in the consultation? Thank you very much. We value your assistance and look forward to consulting further if there are historic properties of religious and cultural significance to your tribe that may be affected by this project.

Sincerely,

Kelly M. Thiemann
Housing and Community Development Manager
Phone: (510) 670-5280
Kelly.thiemann@acgov.org
FAX: (510) 670-6378

enclosures

March 19, 2013

Indian Canyon Mutsun Band of Coastanoan
Ann Marie Sayers, Chairperson
P.O. Box 28
Hollister, CA 95024

In RE: 240 & 251 Kottinger Drive, 4136 Vineyard Avenue & 4153 Regalia Court, Pleasanton, CA
Project-Based Section 8 Vouchers

Dear Ms. Sayers,

Alameda County is considering funding the project listed above with federal funds from the U.S. Department of Housing and Urban Development (HUD). Under HUD regulation 24 CFR 58.4, Alameda County has assumed HUD's environmental review responsibilities for the project, including tribal consultation related to historic properties. Historic properties include archeological sites, burial grounds, sacred landscapes or features, ceremonial areas, traditional cultural places and landscapes, plant and animal communities, and buildings and structures with significant tribal association.

Alameda County will conduct a review of this project to comply with Section 106 of the National Historic Preservation Act and its implementing regulations 36 CFR Part 800. We would like to invite you to be a consulting party in this review to help identify historic properties in the project area that may have religious and cultural significance to your tribe, and if such properties exist, to help assess how the project might affect them. If the project might have an adverse effect, we would like to discuss possible ways to avoid, minimize or mitigate potential adverse effects.

To meet project timeframes, if you would like to be a consulting party on this project, can you please let us know of your interest within 30 days? If you have any initial concerns with impacts of the project on religious or cultural properties, can you please note them in your response?

Enclosed is a map that shows the project area and, if applicable, an additional area of potential indirect effects. The project consists of redevelopment of 90 existing units to 189 units of affordable senior housing at the four addresses below in Pleasanton, Alameda County, California. The project includes demolition of the existing 90 units of affordable senior housing known as Pleasanton Gardens, Kottinger Place and a city-owned building known as "Regalia House" and the new construction of 189 units on four parcels. One of the parcels is currently vacant; the parcel was purchased by the City of Pleasanton in 2005 and a single family home was subsequently demolished.

- 240 Kottinger Drive, Pleasanton, CA 94566 (APN 094-0095-033-03) – Kottinger Place (50 units)
- 251 Kottinger Drive, Pleasanton, CA 94566 (APN 094-0019-017) – Pleasanton Gardens (40 units)
- 4136 Vineyard Avenue, Pleasanton, CA 94566 (APN 094-0095-034) – Vacant Parcel
- 4153 Regalia Court (aka 4138 Vineyard Avenue), Pleasanton CA 94566 (Parcel to be divided – currently part of Kottinger Park APN 094-0095-017) – "Regalia House" (city-owned facility)

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FAX: (510) 670-6378

enclosures

March 19, 2013

Muwekma Ohlone Indian Tribe of the San Francisco Bay Area
Rosemary Cambra, Chairperson
P.O. Box 360791
Milpitas, CA 95036

In RE: 240 & 251 Kottinger Drive, 4136 Vineyard Avenue & 4153 Regalia Court, Pleasanton, CA
Project-Based Section 8 Vouchers

Dear Ms. Cambra,

Alameda County is considering funding the project listed above with federal funds from the U.S. Department of Housing and Urban Development (HUD). Under HUD regulation 24 CFR 58.4, Alameda County has assumed HUD's environmental review responsibilities for the project, including tribal consultation related to historic properties. Historic properties include archeological sites, burial grounds, sacred landscapes or features, ceremonial areas, traditional cultural places and landscapes, plant and animal communities, and buildings and structures with significant tribal association.

Alameda County will conduct a review of this project to comply with Section 106 of the National Historic Preservation Act and its implementing regulations 36 CFR Part 800. We would like to invite you to be a consulting party in this review to help identify historic properties in the project area that may have religious and cultural significance to your tribe, and if such properties exist, to help assess how the project might affect them. If the project might have an adverse effect, we would like to discuss possible ways to avoid, minimize or mitigate potential adverse effects.

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Enclosed is a map that shows the project area and, if applicable, an additional area of potential indirect effects. The project consists of redevelopment of 90 existing units to 189 units of affordable senior housing at the four addresses below in Pleasanton, Alameda County, California. The project includes demolition of the existing 90 units of affordable senior housing known as Pleasanton Gardens, Kottinger Place and a city-owned building known as "Regalia House" and the new construction of 189 units on four parcels. One of the parcels is currently vacant; the parcel was purchased by the City of Pleasanton in 2005 and a single family home was subsequently demolished.

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enclosures

March 19, 2013

The Ohlone Indian Tribe
Andrew Galvan
P.O. Box 3152
Fremont, CA 94539

In RE: 240 & 251 Kottinger Drive, 4136 Vineyard Avenue & 4153 Regalia Court, Pleasanton, CA
Project-Based Section 8 Vouchers

Dear Mr. Galvan,

Alameda County is considering funding the project listed above with federal funds from the U.S. Department of Housing and Urban Development (HUD). Under HUD regulation 24 CFR 58.4, Alameda County has assumed HUD's environmental review responsibilities for the project, including tribal consultation related to historic properties. Historic properties include archeological sites, burial grounds, sacred landscapes or features, ceremonial areas, traditional cultural places and landscapes, plant and animal communities, and buildings and structures with significant tribal association.

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Kelly.thiemann@acgov.org
FAX: (510) 670-6378

enclosures

March 19, 2013

Trina Marine Ruano Family
Ramona Garibay, Representative
30940 Watkins Street
Union City, CA 94587

In RE: 240 & 251 Kottinger Drive, 4136 Vineyard Avenue & 4153 Regalia Court, Pleasanton, CA
Project-Based Section 8 Vouchers

Dear Ms. Garibay,

Alameda County is considering funding the project listed above with federal funds from the U.S. Department of Housing and Urban Development (HUD). Under HUD regulation 24 CFR 58.4, Alameda County has assumed HUD's environmental review responsibilities for the project, including tribal consultation related to historic properties. Historic properties include archeological sites, burial grounds, sacred landscapes or features, ceremonial areas, traditional cultural places and landscapes, plant and animal communities, and buildings and structures with significant tribal association.

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enclosures

Appendix D – Geology and Soils

- **AMSO Consulting Engineers.** *Geotechnical Investigation for Kottinger Residential Development, 240 & 251 Kottinger Drive, 4138 Vineyard Avenue, Pleasanton, California.* Hayward, CA : s.n., March 8, 2013. Project 3591.

AMSO CONSULTING ENGINEERS
SOILS, FOUNDATIONS & ENVIRONMENTAL ENGINEERING

ACE

731 SYCAMORE AVENUE, HAYWARD, CALIFORNIA 94544
Phone (510) 690-0714, Fax: (510) 690-0721, email: basil@amsoconsulting.com

March 8, 2013
Project 3591

Ms. Abby Goldware
MidPen Housing Corp
303 Vintage Park Drive, Suite 250
Foster City, California 94404

Subject: Geotechnical Investigation for
Kottinger Residential Development
240 & 251 Kottinger Drive, 4138 Vineyard Avenue
Pleasanton, California

Dear Ms. Goldware:

This report presents the results of our geotechnical investigation for the Kottinger Residential Development proposed for construction on the following properties in Pleasanton, California.

- 251 Kottinger Drive, (Pleasanton Gardens Parcel)
- 240 Kottinger Drive, (Kottinger Place Parcel)
- 4138 Vineyard Avenue, and
- Regalia Parcel, a City owned property

We understand that MidPen Housing Corp proposes to construct residential development consisting of a mix of one story and multi-stories buildings. Interior asphalt concrete paved driveways will provide access from Kottinger Drive and Vineyard Avenue to the parking areas outside the buildings.

SCOPE OF WORK

We performed the following work for this geotechnical investigation.

1. Reviewed geologic and geotechnical information in our files pertinent to the site and the surrounding area.

2. Explored, sampled and classified foundation soils by means of eleven small diameter exploration drill holes. At the end of drilling, all holes were backfilled with cement grout.

3. Performed laboratory test on selected soil samples obtained from the exploration holes to determine their pertinent index and engineering characteristics.

4. Developed site seismic characteristics in accordance with the California Building Code.

5. Reviewed and analyzed information collected above.

6. Prepared this report summarizing our findings, conclusions, and geotechnical recommendations.

FINDINGS

Surface Conditions

251 Kottinger Drive, Pleasanton Gardens Apartments

This property is located along the south side of Kottinger Drive about 260 feet east of its intersection with 2nd Street in Pleasanton, California. The property is essentially level with and average ground elevation of about 375 feet (Based on the USGS Topographic Maps). The property is bound by Kottinger Drive on the north and by residential properties on the other sides.

At the time of our subsurface exploration in February of 2013, the site was occupied by several one-story residential building and a community building. An asphalt concrete driveway and covered car ports occupy the northeast portion of the property. The middle of the property was covered with lawns and concrete walkways with several mature trees.

240 Kottinger Drive, Kottinger Place Apartments

This property is located along the north side of Kottinger Drive across the street from the Pleasanton Gardens Apartments. The property is almost level with ground elevations between 380 feet along the south to about 390 feet along the north (Based on the USGS Topographic Maps). The property is bound by Kottinger Drive on the south, by a public park along the east and north and by residential buildings and a vacant property on the west.

At the time of our subsurface exploration in February of 2013, this property was occupied by several one-story residential building and a community building. An asphalt concrete driveway and covered car ports occupy the southeast portion of the property. The middle of the property was covered with lawns and concrete walkways with several mature trees.

4138 Vineyard Avenue and Regalia Court

The Regalia Court parcel is owned by the City of Pleasanton and is currently occupied by a one

story building and paved parking. The 4138 Vineyard Avenue property was vacant of any structure at the time of our subsurface investigation.

Site Geology and Subsurface Conditions

Figure 4 shows a portion of a published geologic map of the site and vicinity. This map shows the Kottinger Place parcel to be underlain by **Qpaf**, **Alluvial Fan and Fluvial Deposits (Pleistocene)** and **Qpaf1**, **Alluvial Terrace Deposits (Pleistocene)**. Both deposits consist of brown or tan, medium dense to dense, gravely sand or sandy gravel that generally grades upward, to sandy or silty clay. This was confirmed by all of our shallow exploration borings.

Subsurface conditions under the proposed buildings were explored by means of eleven small diameter exploration borings. The exploration borings were drilled to between 5 feet and 35 feet below existing ground surface. Within the depths of our exploration, the native soils at the site consist of clay, silt and sand.

The 251 Kottinger Drive property was found to be underlain by a thin layer of silty clay (CL) of low plasticity and low potential for expansion. This layer of clay is underlain by loose to medium dense layer of silty clayey sand that extends to a depth of about 10 feet. This layer of sand was not encountered with exploration hole B-3 located near the southeast corner of the property. Below this layer of sand the site is underlain by alternating layers of silty clay and silty sand with gravels.

Ground water was only encountered in exploration holes B-1 at a depth of about 7½ feet and in exploration hole B-2 at a depth of about 16 feet below existing ground surface.

The 240 Kottinger Drive property is underlain by a layer of silty and sandy clay with low plasticity and low potential for expansion, This layer of clay extends to a depth of between 5 and 8 feet and is underlain by dense silty fine sand with fine gravel with an average thickness of about 6 feet and is underlain by silty clay that extends to the maximum depth of our exploration.

No ground water was encountered in any of the exploration drill holes within this property.

The descriptions given above pertain only to the subsurface conditions found at the site at the time of our subsurface exploration in February of 2013. Subsurface conditions, particularly ground water levels and the consistency of the near-surface soils, will vary with the seasons.

Detailed descriptions of the materials encountered in the borings are given on the appended boring and cone penetration test logs together with the results of some of the laboratory tests performed on selected samples obtained from the drill holes.

Seismic Considerations

This site is located within the seismically active San Francisco Bay region but outside any of the Alquist-Priolo Earthquake Fault Zones. The following faults are closest to the site.

Fault	Distance to Fault		Maximum Moment Magnitude
	Miles	Kilometers	
CALAVERAS (No.of Calaveras	2.3	3.7	6.8
HAYWARD (Total Length)	8	13	7.1
GREENVILLE	10	16	6.9
CONCORD - GREEN VALLEY	17	27	6.9
HAYWARD (SE Extension)	13	22	6.4
CALAVERAS (So.of Calaveras	16	26	6.2

Seismic hazards can be divided into two general categories, hazards due to ground rupture and hazards due to ground shaking. Since no active faults are known to cross this property, the risk of earthquake-induced ground rupture occurring across the project site appears to be remote. Based on historic records and on the known general seismicity of the San Francisco Bay region, we consider it probable that during the next 50 years the site will be shaken by at least one earthquake of Richter Magnitude 6.5 or greater, and by numerous earthquakes of lesser Magnitude, all having epicentral locations within about 20 miles of the site.

Should a major earthquake occur with an epicentral location close to the site, ground shaking at the site will undoubtedly be severe, as it will for other property in the general area. Even under the influence of severe ground shaking, the mostly clayey soils that underlie this site are unlikely to liquefy.

Seismic Design Parameters

The following general site seismic parameters may be used for design in accordance with the California Building Code.

Site Class: **D** (Stiff Soil Profile)

Mapped Acceleration Parameters: $\mathbf{S_s}$ (for short periods) = 1.64g
$\mathbf{S_1}$ (for 1-second period) = 0.60g

Site Coefficient: $\mathbf{F_a}$ (for short periods) = 1.0
$\mathbf{F_v}$ (for 1-second period) = 1.5

Adjusted Maximum Considered EQ Spectral Response Acceleration Parameters:

$$\mathbf{S_{MS} = F_a * S_s} = 1.64g$$
$$\mathbf{S_{M1} = F_v * S_1} = 0.90g$$

Design Spectral Response Acceleration Parameters:

$$\mathbf{S_{DS} = 2/3 * S_{MS}} = 1.10g$$
$$\mathbf{S_{D1} = 2/3 * S_{M1}} = 0.60g$$

Seismic Design Category: **D**

We should point out that the structural seismic design is not intended to eliminate damage to a structure. The goal of the design system is to minimize the loss of human life. It is unlikely that any structure can be designed to withstand the forces of a great earthquake without any damage at all.

Potential Geologic and Geotechnical Hazards

There are several potential geologic and geotechnical hazards that can affect any given site. They are discussed below, along with any required mitigation measures.

Ground Rupture: Since no faults are believed to cross the site, it is our opinion that this is not a significant hazard to this site. No mitigation is required.

Ground Shaking: This hazard is common to all properties in California. Mitigate by proper structural design and by following the recommendations presented in this report.

Lurching and Lateral Spreading: Such seismically generated movements are induced in areas with weak soils near open cuts or slopes. Such conditions do not exist on this site. No mitigation is required.

Liquefaction: No potentially liquefiable sands were found at this site. No mitigation is required.

Landsliding: The site and vicinity are essentially flat. Landsliding is not a potential hazard to this site. No mitigation is required.

Compressible Soils: The only area of the proposed development that has compressible soils is located within the north portion of the 252 Kottinger Drive. The clayey soils that underlie the rest of the proposed developmendt site have a low potential of compression and settlement under the influence of the building loads. The anticipated total settlement is about 1 inch and differential settlement of about half of the total settlement. The building foundations should be structurally designed to tolerate the anticipated settlement.

Expansive Soils: The clayey soils that underlie the site have low potential for expansion. To minimize the potential effect of expansion on the proposed structures, the surface layer of clay should be water conditioned and compacted as recommended in the "Site Preparation, Grading and Compaction" section of this report.

Erosion: The site soils are moderately erodable. Mitigate by controlling the discharge of concentrated water, both during and after construction.

CONCLUSIONS AND RECOMMENDATIONS

The site is suitable for the proposed construction of the housing project provided that the recommendations presented in this report are followed during the design and construction phases.

The following recommendations, which are presented as guidelines to be used by project planners and designers, have been prepared assuming **AMSO CONSULTING ENGINEERS** will be commissioned to observe and test during site grading and foundation construction. This additional opportunity to inspect the project site will allow us to compare subsurface conditions exposed during construction with those that were observed during this investigation.

Site Preparation Grading and Compaction

- Areas of the site to be built on or paved should be stripped to remove any surface vegetation and organic topsoil. Soils containing more than 2% by weight of organic matter should be considered organic. Stripping depths should be determined in the field by the Soils Engineer at the time of stripping but, for planning purposes, an average stripping depth of 3 inches may be assumed. Strippings should be wasted off-site or, if so required by the Project Architect, stockpiled for subsequent use in landscape areas.

- Existing structures along with all utility lines including electric, water, sanitary sewers and storm drains designated for abandonment on the Project Plans, should be dug out and removed. All debris and materials arising from demolition and removal operations should be wasted off-site.

- Any existing fill soils that may be uncovered during grading within areas of the site to be built on or paved should be sub-excavated. The depth and horizontal limits of these excavations should be determined in the field by the Soils Engineer at the time of excavation. For planning purposes, however, it may be assumed that these excavations will extend to an average depth of about 2 feet below existing ground surface. These excavations should extend 5 feet horizontally beyond proposed building lines and should extend 3 feet horizontally beyond edges of pavement.

- Soil surfaces exposed by excavations should be scarified to a depth of 10 inches, conditioned with water (or allowed to dry, as necessary) to produce a soil water content of at least 3 percent above the optimum value and then compacted to 90 percent relative compaction based on ASTM Test D1557-91.

- Structural fill may then be placed up to design grades in the proposed building and pavement areas. Structural fill using on-site inorganic soil, or approved import, should be placed in layers, each not exceeding 8 inches thick (before compaction), conditioned with water (or allowed to dry, as necessary) to produce a soil water content of at least 3 percent above the optimum value, and then compacted to at least 90 percent relative compaction based of ASTM Test D1557-91. The upper 8 inches of pavement subgrades should be compacted to about 95 percent relative compaction based on ASTM Test D1557-91.

- On-site soils proposed for use as structural fill should be inorganic, free from deleterious materials, and should contain no more than 15% by weight of rocks larger than 3 inches (largest dimension) and no rocks larger than 6 inches. The suitability of existing soil for reuse as a structural fill should be determined by a member of our staff at the time of grading. We expect that most of the existing soil will be suitable for reuse as structural fill.

- If import is required for use as structural fill, it should be inorganic, should have a low expansion potential (with a plasticity index of 15 percent or less) and should be free from clods or rocks larger than 4 inches in largest dimension. Prior to delivery to the site, proposed import should be tested in our laboratory to verify its suitability for use as structural fills and, if found to be suitable, further tested to estimate the water content and density at which it should be placed.

Building Foundations

The proposed buildings may either be supported on either conventional shallow foundations or on concrete post-tensioned slab bearing on competent in-place native soil or on compacted structural fill placed as described in the Site Preparation, Grading and Compaction section of the geotechnical investigation report. The multi-story building proposed for construction within the 251 Kottinger Drive should be supported on concrete post-tension slab.

Conventional Shallow Foundations

Continuous, reinforced concrete foundations may be designed to impose pressures on foundation soils up to 2500 pounds per square foot from dead plus normal live loading. Continuous foundations should be at least 12 inches wide and should be embedded at least 18 inches below rough pad grade or adjacent finished grade, whichever is lower.

Interior isolated foundations, such as may support column loads, may be designed to impose pressures on foundation soils up to 3000 pounds per square foot from dead plus normal live loading. Interior foundations should be embedded at least 18 inches below rough pad grade.

Based upon our experience with similar buildings constructed on similar foundation soils, we expect the total long-term static settlement of the building to be approximately 1(±) inch. Using the design values presented above, and assuming a minimum embeddment of both continuous and isolated footings, we would expect the post-construction differential settlement of a relatively uniformly loaded structure to be no more than about 3/4 of the total settlement.

Post-Tension Slab

The proposed buildings may also be supported post-tension concrete slab bearing on native soils or on compacted structural fill. Post tensioned concrete slabs should be designed by the project structural engineer; however, it should be at least 10 inches thick. The perimeter of the post tensioned slab should be embedded a minimum of 7 inches below the bottom of the slab to contain the capillary break material, vapor barrier and protective layer of sand (if used).

The following soil and climate parameters were used based on soils parameters from parcels b and C.

- Thornthwaite Moisture Index -15
- Percent passing sieve 200 60
- Percent clay content 40
- Plasticity Index 20
- Predominant clay mineral Illite
- Depth to constant moisture 5 feet
- Soil Suction (pF) 3.6
- Moisture velocity 0.7 inches/month

The post tensioned concrete slabs may be designed based on the following criteria.

- Allowable bearing pressure 2000 pound per square foot
- Subgrade soils friction coefficient 0.3
- Edge Moisture Variation distance (em),
  - Center lift 5.0 feet
  - Edge lift 2.5 feet

- Differential Swell (ym)
  - Center lift 1.0 inch
  - Edge lift 0.5 inch

Lateral forces on the proposed building may de resisted by passive pressure acting against the sides of footings and by friction between the soil and the bottom of the footing. An equivalent fluid pressure of 300 pounds per square foot per foot of depth may be used to calculate the ultimate passive resistance to lateral loads. A coefficient of friction of 0.3 may be used to calculate resistance to lateral loads at the base of foundations.

General

The allowable foundation pressures given previously may be increased by one-third when considering additional short-term wind or seismic loading.

During foundation construction, care should be taken to minimize evaporation of water from foundation and floor subgrades. Scheduling the construction sequence to minimize the time interval between foundation excavation and concrete placement is important. Concrete should be placed only in foundation excavations that have been kept moist, are free from drying cracks and contain no loose or soft soil or debris.

Retaining Walls

The following may be used in the design calculations of any reinforced concrete retaining walls that may be needed.

1. The average bulk density of material placed on the backfill side of the wall will be 120 pcf.

2. The vertical plane extending down from the ground surface to the bottom of the heel of the wall will be subject to pressure that increases linearly with depth as follows.

Condition	Design Pressure
Active, level backfill (drained)	45 pcf
At-rest, level backfill (drained)	65 pcf

   The above values are non-seismic conditions. Active pressures should only be used for walls that are not restrained to move. At-rest pressures should be used for walls that are restrained from movement such as basement walls.

3. Considering the proximity of the site to active faults, retaining walls should be designed for seismic loading. The effects of earthquakes may be simulated by applying a horizontal line load surcharge to the stem of the wall at a rate of 12 H^2 lb/horizontal foot of wall, where H is the height of the surface of the backfill above the base of the wall. This surcharge should be applied at a height of 0.6H above the base of the wall.

4. A coefficient of "friction" of 0.3 may be used to calculate the ultimate resistance to sliding of the wall base over the ground beneath the base.

5. An equivalent fluid pressure of 350 psf/ft may be used to calculate the ultimate passive resistance to lateral movement of the ground in front of the toe of the wall.

6. Foundations for reinforced concrete retaining walls should be embedded at least 18 inches below rough pad grade or adjacent finished grade, whichever is lower.

7. A maximum allowable bearing pressure of 2500 psf may be used for the ground beneath the toe of the wall. This value is for non-seismic conditions and may be increased by one third when considering additional loads on the wall resulting from earthquakes.

A zone of drainage material at least 12 inches wide should be placed on the backfill side of walls designed for drained condition. This zone should extend up the back of the wall to about 18 inches down from the proposed ground surface above. The upper 18 inches or so of material above the drainage material should consist of clayey soil.

The drainage material and the clayey soil cap should be placed in layers about 6 inches thick and moderately compacted by hand-operated equipment to eliminate voids and to minimize post-construction settlement. Heavy compaction should not be applied; otherwise, the design pressure on the wall may be exceeded.

The drainage material should consist of either Class 2 Permeable Material complying with Section 68 of the CALTRANS Standard Specifications, latest edition, or 3/4 to 1½ inch clean, durable coarse aggregate. If the coarse aggregate is chosen as the drainage material, it should be separated from all adjacent soil by Mirafi 700X or a similar filter fabric approved by the project Soil Engineer.

Any water that may accumulate in the drainage material should be collected and discharged by a 4-inch-diameter, perforated pipe placed "holes don" near the bottom of the drainage material. The perforated pipe should have holes no larger that 1/4-inch diameter.

Concrete Slabs-On-Grade

Concrete floor slabs should be constructed on compacted soil subgrades prepared as described in the section on Site Preparation, Grading and Compaction.

If dampness of floors is not objectionable, concrete slabs may be constructed directly on the water-conditioned and compacted soil subgrade.

To minimize floor dampness, however, the following general guidelines may be used to minimize moisture-related problems in concrete floor slabs-on-grade that will be covered with moisture-sensitive floor coverings, adhesives, and coatings.

1. Install a section of capillary break material at least five inches thick. The capillary break should be a free-draining material, such as 3/8" pea gravel or a permeable aggregate complying with CALTRANS Standard Specifications, Section 68, Class 1, Type A or Type B.

2. Cover the capillary break material with a high quality membrane vapor barrier. The membrane should be at least 10-mil thick.

3. To minimize the potential of accidental damage to the membrane vapor barrier and the potential of concrete slab curling, a protective cushion of sand or 3/8" pea gravel at least two inches thick should be placed between the membrane vapor barrier and the floor slab.

4. At the owner's option, the layer of protective sand mentioned above may be omitted provided that a 15 mil or thicker membrane vapor barrier (such as Stego Wrap) is used and that additional attention is given to the design of reinforcement so that potential curling stresses within the slab are addressed.

5. Consider using concrete having a low water/cement ratio to accelerate slab drying time. Use of fly ash may help reduce soluble alkali content in the slab. Water should not be added to the concrete after initial batching.

6. Water vapor emission levels and pH should be measured as required by the flooring material manufacturer prior to floor installation. Measurements and calculations should be performed in accordance with ASTM F1868-98 and F710-98.

The guidelines presented above are based on information obtained from various published sources including the American Concrete Institute (ACI) and Portland Cement Association (PCA). These guidelines are only intended to present information that can be utilized to minimize the potential of long term impact from slab moisture infiltration. The application of these procedures does not affect the geotechnical aspect of foundation performance.

Exterior Concrete Slab-on-Grade

Considering the potentially expansive nature of the surface layer of clay at this site, for flat work, exterior concrete slabs on grade (such as for patios and walks) should be at least 4 inches thick and should be cast over a minimum of 4 inches of class 2 aggregate base compacted to about 95 percent over compacted subgrade soils as described in the "Site Preparation, Grading and Compaction" section of our project geotechnical report. Exterior concrete slabs-on-grade should be reinforced with at least number 4 rebars spaced at 24 inches each way. If wire mesh reinforcements are used then they should be the flat panel welded wire mesh mats (not the rolled type) and should be 6x6 W4.7/4.7 (formerly called 6x6 – 3x3) cast in the center of the concrete section.

Portland Cement Concrete Pavement

Concrete pavement section, where traffic includes occasional light trucks, should consist of at least 5 inches of Portland cement concrete pavement on top of at least 6 inches of Class 2 aggregate base material placed and compacted as described in the "Site Preparation, Grading and

Compaction" section of the report. Prior to the placement and compaction of the class 2 aggregate base, it is important to water condition and compact the pavement subgrade soils as described in the "Site Preparation, Grading and Compaction" section of the report.

Concrete pavements should be reinforced with at least No. 4 reinforcing bars placed at 18 inches on-center in both directions.

For design of Portland Cement concrete pavement section, a modulus of subgrade reaction of k=130 pounds per square inch per inch should be used for the on-site compacted soils. Concrete for vehicle pavements should have a modulus of rupture of at least 550 pounds per square foot.

Vehicle Pavements

Near-surface soils across the site have a moderate pavement-supporting capacity. Considering the clayey nature of the pavement subgrade soils, an R-value of 10 at 300 psi exudation pressure was assumed in pavement design calculations. The actual R-value of the pavement soil subgrade should be tested and verified prior to construction.

Recommended minimum sections for pavement areas are presented in Table 1. A pavement section based on a Traffic Index of at least 5 should be selected for areas where traffic includes occasional light trucks.

TABLE 1 - RECOMMENDED MINIMUM ASPHALT CONCRETE PAVEMENT SECTIONS ON NATIVE SOILS

Traffic Index (T.I.)	Asphalt Concrete (inches)	Class 2 Aggregate Base (inches)	Total Thickness (inches)
4.5	3.0	8.0	11.0
5.0	3.0	9.0	12.0
5.5	3.5	10.0	13.5
6.0	4.0	11.0	15.0

Pavement subgrades should be compacted as described above in the section for Site Preparation Grading and Compaction.

Curbs and gutters should be constructed directly on the soil subgrade rather than on a layer of aggregate base. This will minimize the amount of surface water that seeps below the curb and into the pavement subgrade. The seepage of water into subgrade soils beneath vehicle

pavements, can result in subgrade softening and premature pavement distress.

Pavement construction should comply with the requirements of the CALTRANS Standard Specifications, latest editions, except that compaction requirements for pavement soil subgrades and aggregate base should be based on ASTM Test D1557-91, as described in the part of this report dealing with "Site Preparation, Grading and Compaction."

Utility Trenches

The attention of contractors, particularly the underground contractor, should be drawn to the requirements of California Code of Regulations, Title 8, Construction Code Section 1540 regarding Safety Orders for "Excavations, Trenches, Earthwork".

For purposes of this section of the report, bedding is defined as material placed in a trench up to 1 foot above a utility pipe and backfill is all material placed in the trench above the bedding.

Unless concrete bedding is required around utility pipes, free-draining sand should be used as bedding. Sand proposed for use in bedding should be tested in our laboratory to verify its suitability and to measure its compaction characteristics. Sand bedding should be compacted by mechanical means to achieve at least 90 percent compaction density based on ASTM Tests D1557-91.

Approved, on-site, inorganic soil, or imported material may be used as utility trench backfill. Proper compaction of trench backfill will be necessary under and adjacent to structural fill, building foundations, concrete slabs and vehicle pavements. In these areas, backfill should be conditioned with water (or allowed to dry) to produce a soil-water content of about 5 percent above the optimum value and placed in horizontal layers not exceeding 6 inches in thickness (before compaction). Each layer should be compacted to 87-90 percent relative compaction based of ASTM Test D1557-91. The upper 8 inches of pavement subgrades should be compacted to about 90 percent relative compaction based on ASTM Test D1557-91.

Where any trench crosses the perimeter foundation line of any building, the trench should be completely plugged and sealed with compacted clay soil for a horizontal distance of at least 2 feet on either side of the foundation. The bottom of utility trenches should be located above an imaginary line extending at a slope of 1½ to 1 (horizontal to vertical) from the bottom of nearby building foundation.

Soil Corrosivity

Three soil samples were obtained from the site at depths of about 4 feet below existing ground surface. These soil samples were delivered to Cooper Testing Laboratory to test for the potential for soil corrosivity. The laboratory test results of these samples are attached to this report.

Resistivity

Soil resistivity tests (ASTM G57) were performed on the soil samples. The resistivity of soil is a good general indicator of soil corrosivity since metal corrosion is an electrochemical reaction, i.e., the greater the current in a given corrosion cell, the higher the corrosion rate. Electrical resistivity is the inverse of electrical conductivity. Soil resistivity at 251 Kottinger Drive was found to be about 2311 Ohm-cm and at the 240 Kottinger Drive site between 156 and 766 Ohm-cm.

The NACE International classifications of corrosivity for steel in soils reported in the attached Corrosion Tests Summary Table, are as shown below:

Soil resistivity (ohm cm)	Corrosivity Rating
>20,000	Essentially non-corrosive
10,000 to 20,000	Mildly corrosive
5,000 to 10,000	Moderately corrosive
3,000 to 5,000	Corrosive
1,000 to 3,000	Highly corrosive
<1,000	Extremely corrosive

For the potential of steel corrosion, the NACE International soil corrosivity classification is based on average soil resistivity values for soils in general. Based upon the minimum resistivity of the three samples (156 ohm- cm), the soil would be classified as "extremely corrosive."

The evaluation of ductile iron and cast iron can be compared to the steel classification presented above. Considering the corrosion rates of iron and steel are very close, we generally compare the two classification systems. The two classification systems compare favorably and lead to the conclusion that soils represented by the samples tested are "highly corrosive" with respect to ductile and gray cast iron.

Chloride

Soil Chloride test (Cal 422-Mod) was performed on the soil samples and was found to be between 38 and 348 mg/kg. This chloride content is considered negligible.

Sulfate

Soil Water Soluble Sulfate test (Cal 417-Mod) was performed on the soil samples and was found to be less than 8 mg/kg and 212 mg/kg. This amount of water soluble sulfates is considered negligible.

Based on the results of the corrosion test performed on the soil samples, on site soils are considered potentially corrosive for steel and cast iron. Portland Cement Type II may be used for all concrete in contact with soil. Concrete steel reinforcement should have at least 3 inches cover for all concrete in contact with water.

Surface Drainage

Surface drainage gradients should be planned to prevent ponding and to promote drainage of surface water away from building foundations, slabs, edges of pavements and sidewalks, and towards suitable collection and discharge facilities.

Water seepage or the spread of extensive root systems into the soil subgrades of foundations, slabs, or pavements, could cause differential movements and consequent distress in these structural elements. This potential risk should be given due consideration in the design and construction of landscaping.

Drainage ditches and bio-swales should be located at least 5 feet away from building foundations, slabs, edges of pavements and sidewalks, and towards suitable collection and discharge facilities. Unpaved drainage swales and ditches should have a gradient of about 2 percent. If drainage swales and ditches are located less than 5 feet from pavements, then the curbs should be embedded at least 6 inches below pavement subgrade elevation.

If detention systems are used to collect and discharge surface water, they should be located at least 10 feet away from building foundations, slabs, edges of pavements and sidewalks. Furthermore, the bottom of the detention system should be located above an imaginary line extending at a slope of 1½ to 1 (horizontal to vertical) from the bottom of nearby building foundation.

Follow-up Geotechnical Services

Our recommendations are based on the assumption that **AMSO CONSULTING ENGINEERS** will be commissioned to perform the following services.

1. Review final grading and foundation plans prior to construction.

2. Observe and advise during clearing and stripping of the site.

3. Observe, test and advise during grading and placement of structural fill.

4. Test proposed capillary break material that will be used beneath concrete slabs-on-grade and advise on suitability.

5. Observe and advise during foundation and slab construction.

6. Observe, test and advise during utility trench backfilling.

7. Observe, test and advise during construction of pavements.

LIMITATIONS

The recommendations contained in this report are based on certain plans, information and data that have been provided to us. Any change in those plans, information and data will render our recommendations invalid unless we are commissioned to review the change and to make any necessary modifications and/or additions to our recommendations.

Subsurface exploration of any site is necessarily confined to selected locations. Conditions may, and often do, vary between and around such locations. Should conditions different from those encountered in our explorations come to light during project development, additional exploration, testing and analysis may be necessary; changes in project design and construction may also be necessary.

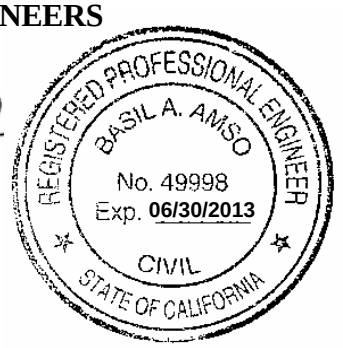
Our recommendations have been made in accordance with the principles and practices generally employed by the geotechnical engineering profession. This is in lieu of all other warranties, express or implied.

March 8, 2013
Project 3591

All earthwork and associated construction should be observed by our field representative, and tested where necessary, to compare the generalized site conditions assumed in this report with those found at the site at the time of construction, and to verify that construction complies with the intent of our recommendations.

Report prepared by:

AMSO CONSULTING ENGINEERS



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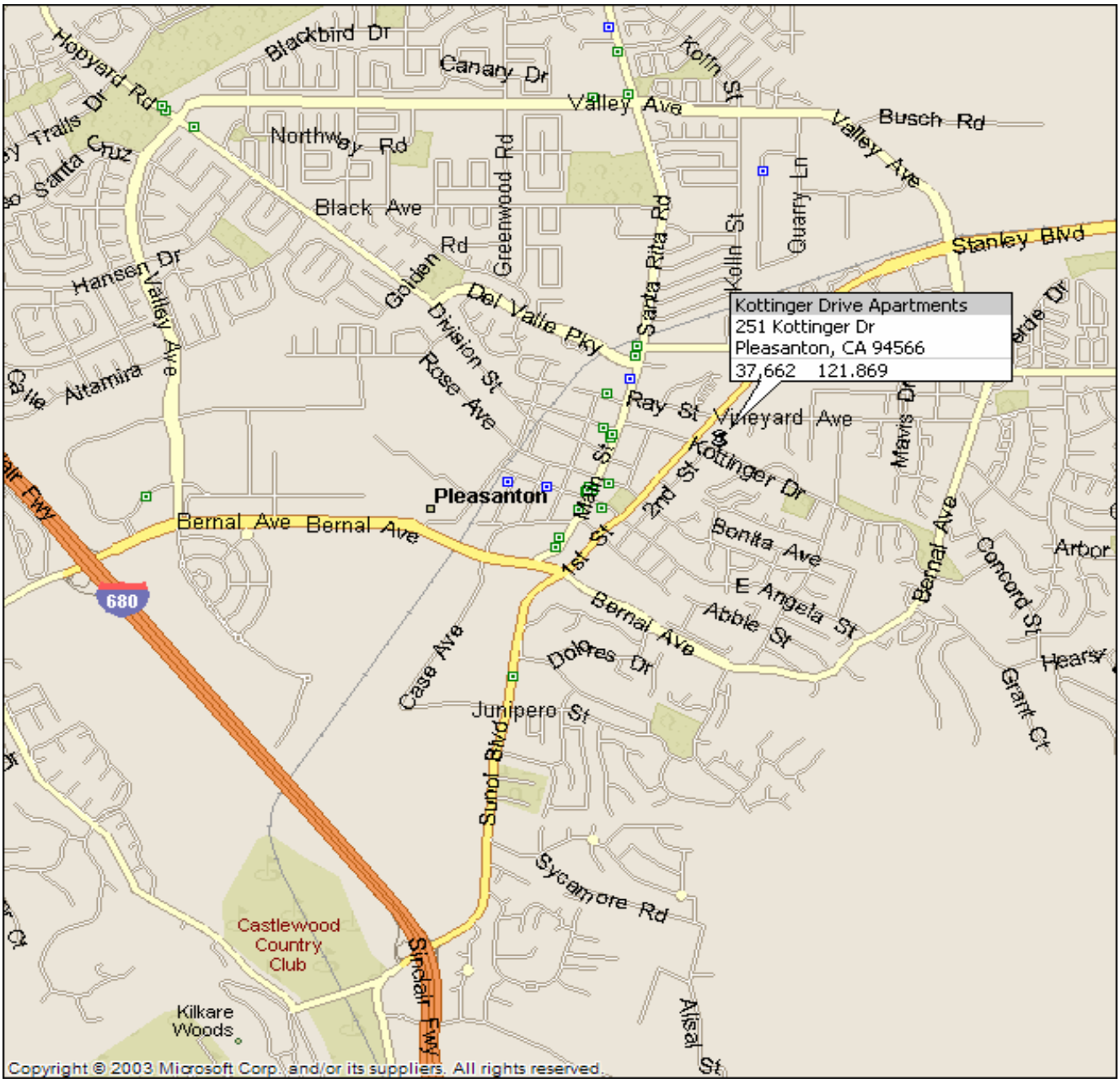
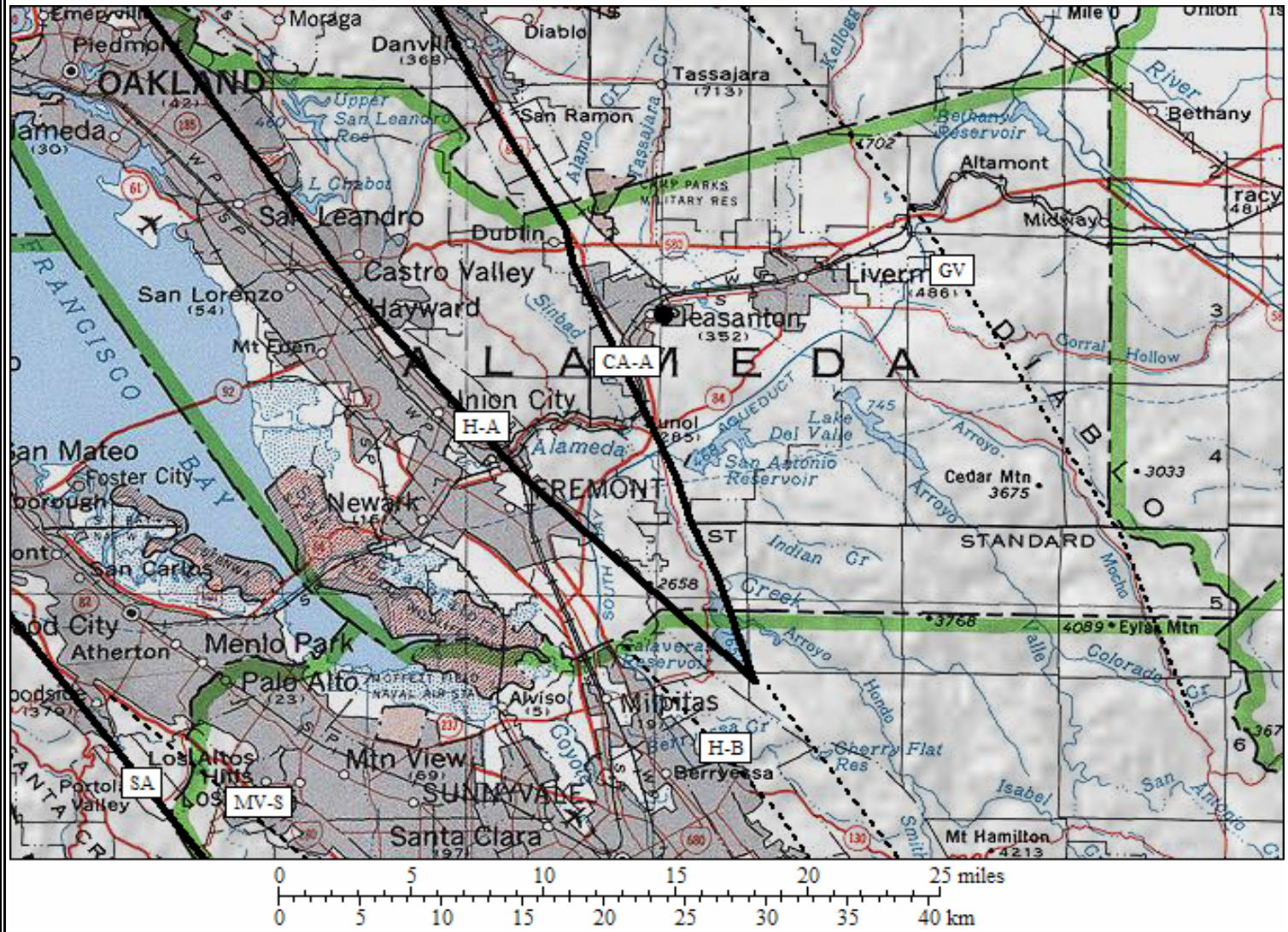


AMSO CONSULTING ENGINEERS	**VICINITY MAP**	**FIGURE 1**
MARCH 2013	**KOTTINGER RESIDENTIAL DEVELOPMENT 240 & 251 KOTTINGER DRIVE PLEASANTON, CALIFORNIA**	**PROJECT 3591**

AMSO CONSULTING ENGINEERS	SITE PLAN AND LOCATION OF EXPLORATION HOLES	FIGURE 1
MARCH 2013	KOTTINGER RESIDENTIAL DEVELOPMENT 240 & 251 KOTTINGER DRIVE & 4138 VINEYARD AVENUE PLEASANTON, CALIFORNIA	Project 3591

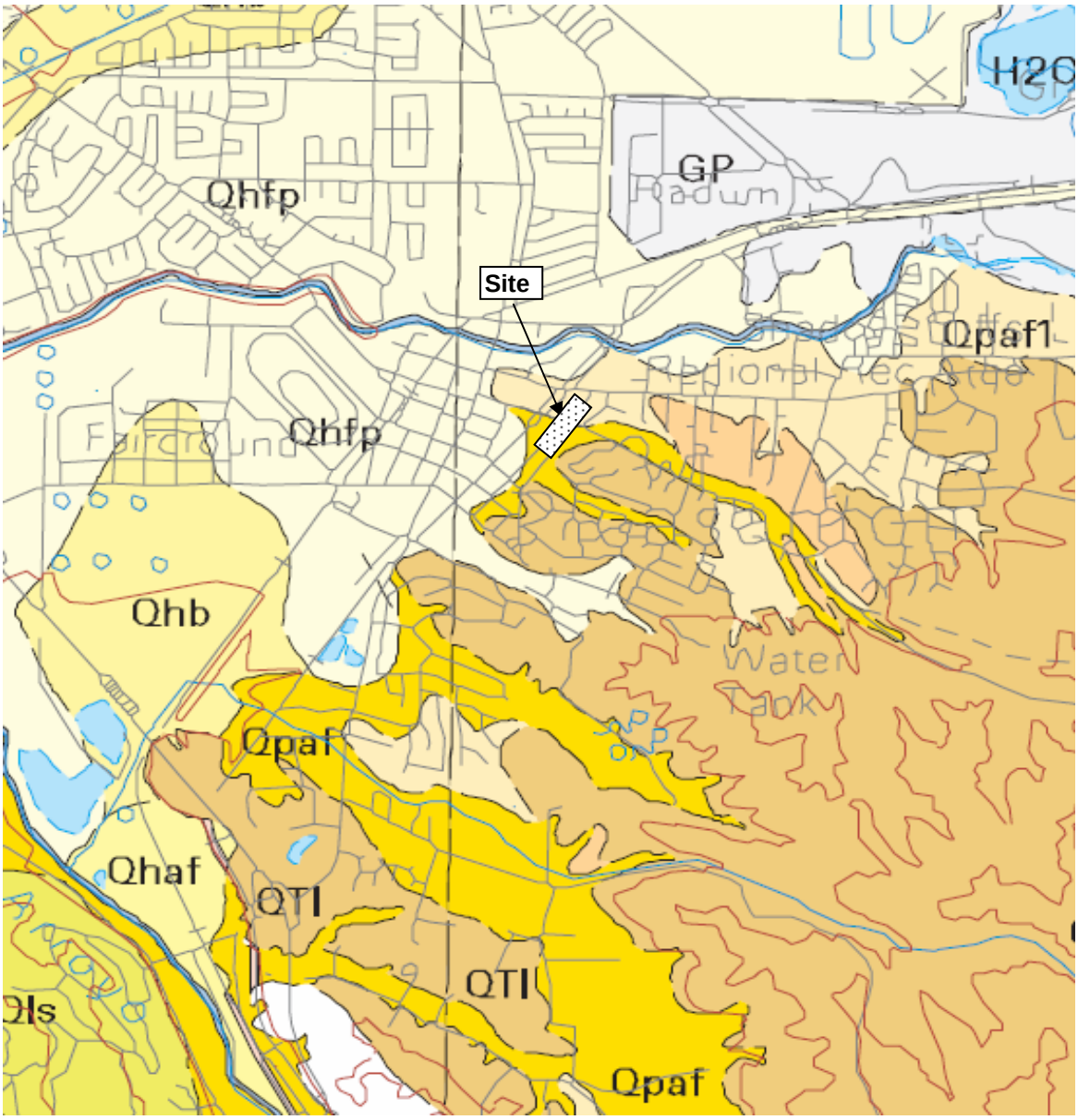


LEGEND

———	Type "A" Faults
SA	San Andreas
HA	Hayward
CA	Calaveras
·····	Type "B" Faults
GV	Greenville
CA-B	Calaveras (So. Of Reser)
H-B	Hayward - SE Ext.
MV-S	Monte Vista - Shannon
●	Site Location

This map should not be used to determine whether or not a given property lies on a fault line. Its only purpose is to give the reader of this report a feel of aprox. distances to Types A & B fault.
Faults other than Types A & B are not shown on this map.

AMSO CONSULTING ENGINEERS	APPROXIMATE LOCATION OF FAULTS	FIGURE 3
MARCH 2013	KOTTINGER RESIDENTIAL DEVELOPMENT 240 & 251 KOTTINGER DRIVE PLEASANTON, CALIFORNIA	Project 3591

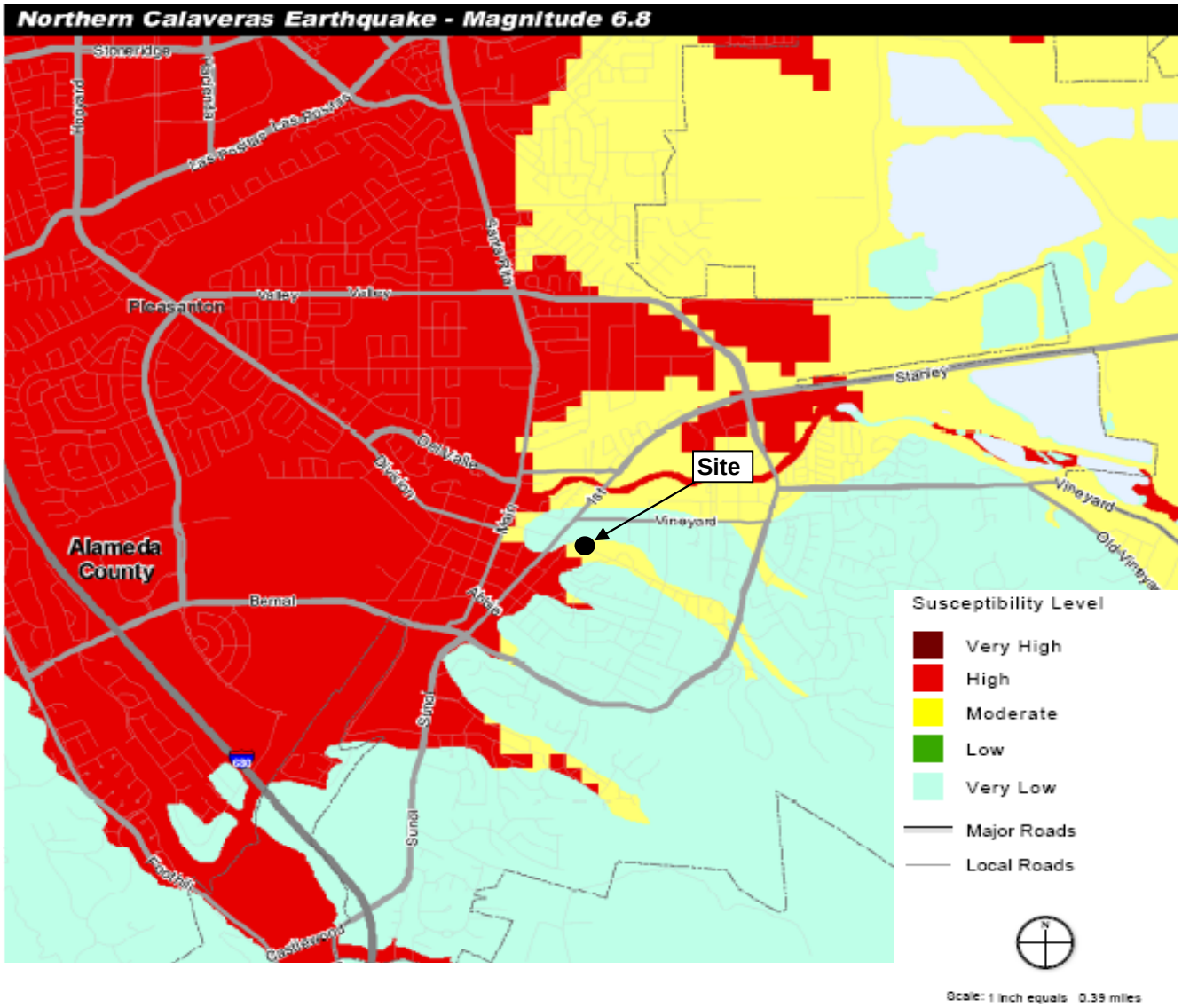


MAP SOURCE: **Quaternary Geology of Alameda County and Surrounding Areas, California Derived from the Digital Database Open File 97-97 by E.J. Helley and R.W. Graymer, 1997**

LEGEND

Qpaf, Qpaf1 **Alluvial Fans and Fluvial Deposits (Pleistocene)** Brown dense gravely and clayey sand or clayey gravel that fines upward to sandy clay.

AMSO CONSULTING ENGINEERS	**GEOLOGIC MAP**	**FIGURE 4**
MARCH 2013	**KOTTINGER RESIDENTIAL DEVELOPMENT 240 & 251 KOTTINGER DRIVE PLEASANTON, CALIFORNIA**	**PROJECT 3591**



Source: This map is based on work by William Lettis & Associates, Inc. and USGS. USGS Open-File Report 00-444, Knudsen & others, 2000 and USGS Open-File Report 2006-1037, Witter & others, 2006

AMSO CONSULTING ENGINEERS	**LIQUEFACTION SUSCEPTIBILITY MAP**	**FIGURE 5**
MARCH 2013	**KOTTINGER RESIDENTIAL DEVELOPMENT 240 & 251 KOTTINGER DRIVE PLEASANTON, CALIFORNIA**	**PROJECT 3591**

APPENDIX A

Key to Exploration Logs and Boring Logs

KEY TO EXPLORATORY BORING LOGS

SOIL CLASSIFICATIONS

PRIMARY DIVISIONS			GROUP1 SYMBOL	SECONDARY DIVISIONS
COARSE GRAINED SOILS More than half of material is larger than No. 200 sieve size	**GRAVELS** More than half coarse fraction is larger than No.4 sieve	Clean Gravels (less than5% fines*)	**GW**	Well graded gravels, gravel-sand mixtures, little or no fines
			GP	Poorly graded gravels, gravel-sand mixtures, little or no fines
		Gravel with fines*	**GM**	Silty gravels, gravel-sand-silt mixtures, non-plastio fines
			GC	Clayey gravels, gravel-sand-clay mixtures, plastio fines
	SANDS More than half coarse fraction is smaller than No.4 sieve	Clean Sands (less than 5%fines*)	**SW**	Well graded sands, gravelly sands, little or no fines
			SP	Poorly graded sands or gravelly sands, little or no fines
		Sands with fines*	**SM**	Silty sands, silt-sand mixtures, non-plastio fines
			SC	Clayey sand, sand-clay mixtures, plastio fines
FINE GRAINED SOILS More than half of material is smaller than No. 200 sieve size	**SILTS AND CLAYS** Liquid limit is less than 35		**ML**	Inorganic silts, clayey silts, rock flour, silty very fine sands
			CL	Inorganic clays of low plasticity, gravelly clay of low plasticity
			OL	Organic silts and organic silty clays of low plasticity
	SILTS AND CLAYS Liquid limit is between35 and 50		**MI**	Inorganic silts, clayey silts and silty fine sand with intermediate plasticity
			CI	Inorganic clays, gravely clays, sandy clays and silty clays of intermediate plasticity
			OI	Inorganic clays and silty clays of intermediate plasticity
	SILTS AND CLAYS Liquid limit is greater than 50		**MH**	Inorganic silts, clayey silts, elastic silts, micaceous or diatomaceous silty or fine sandy soil
			CH	Inorganic clays of high plasticity
			OH	Organic clays and silts of high plasticity
HIGHLY ORGANIC SOILS			**Pt**	Peat, meadow mat, highly organic soils

GRAIN SIZES

U.S. STANDARD SERIES SIEVE				CLEAR SQUARE SIEVE OPENINGS			
200	**40**	**10**	**4**	**¾"**	**3"**	**12"**	
Silts and Clays	Fine	Medium	Coarse	Fine	Coarse	Cobbles	Boulders
	SAND			**GRAVEL**			

RELATIVE DENSITY

SANDS, GRAVELS AND NON-PLASTIC SILTS	BLOWS/FOOT*
VERY LOOSE	0 – 4
LOOSE	4 – 10
MEDIUM DENSE	10 – 30
DENSE	30 – 50
VERY DENSE	OVER 50

CONSISTENCY

CLAYS AND PLASTIC SILTS	UNCONFINED SHEAR STRENGTH (PSF)	BLOWS/FOOT*
VERY SOFT	0 – 250	0 – 2
SOFT	250-500	2 – 4
FIRM	500-1000	4 – 8
STIFF	1000-2000	8 – 16
VERY STIFF	2 000– 4000	16 – 32
HARD	>4000	OVER 32

SYMBOLS

▽	Initial Ground Water Level
▼	Final Ground Water Level
*	Standard Penetration Sampler
X	Modified California Sampler
D	Dames & Moore Sampler

NOTES

*BLOWS per FOOT – Resistance to advance the soil sampler in number of blows of a 140-pound hammer falling 30 inches to drive a split spoon sampler.

Stratification lines on the logs represent the approximate boundary between soil types, and the transition may be gradual.

Modified California Sampler – 2 ½ O.D. (1 7/8 Inch I.D.) sampler

Standard Penetration Sampler – 2 inch O.D. (1 3/8 Inch I.D.) split spoon sampler (ASTM D1586).

Dames & Moore Sampler – 3 inch O.D. (2.5 inch I.D.) sampler

BORING LOG

No. B-1

PROJECT **KOTTINGER RESIDENTIAL DEVELOPMENT** DATE 02/14/2013 LOGGED BY BAA

DRILL RIG Continuous Flight Auger, Truck Mount HOLE DIA. 4" SAMPLER X - Modified California; * - S.P.T

GROUND WATER DEPTH INITIAL 8 ' FINAL 7.5' HOLE ELEVATION

DESCRIPTION	SOIL TYPE	DEPTH	SAMPLE	BLOWS PER FOOT	POCKET PEN (tsf)	TORVANE (tsf)	LIQUID LIMIT (%)	WATER CONTENT (%)	PLASTIC LIMIT (%)	DRY DENSITY (pcf)	FAILURE STRAIN (%)	UNCONFINED COMPRESSIVE STRENGTH (psf)
Silty Sandy Clay; brown, damp, medium stiff; with minor gravels	CL	1										
		2	x				37		18			
			x	16	1.5			16		97	9	1705
Silty Sand with Gravel; light brown, damp, medium dense	SM/ GP	3										
		4										
		5	x	22				7		117		
		6										
		7										
Silty Clay; light grayish brown, moist, stiff	CL	8										
		9										
		10	x	25	2.5			19		101	8	2815
		11										
		12										
		13										
		14										
		15	x	21	3			26		98	7	2090
		16										
		17										
		18										
		19										
Bottom of hole at 20 feet		20	x	37	4.5			25		99	9	6455

BORING LOG

No. B-2

PROJECT **KOTTINGER RESIDENTIAL DEVELOPMENT** DATE 02/14/2013 LOGGED BY BAA

DRILL RIG Continuous Flight Auger, Truck Mount HOLE DIA. 4" SAMPLER X - Modified California; * - S.P.T

GROUND WATER DEPTH INITIAL 16.5 ' FINAL 16 ' HOLE ELEVATION

DESCRIPTION	SOIL TYPE	DEPTH	SAMPLE	BLOWS PER FOOT	POCKET PEN (tsf)	TORVANE (tsf)	LIQUID LIMIT (%)	WATER CONTENT (%)	PLASTIC LIMIT (%)	DRY DENSITY (pcf)	FAILURE STRAIN (%)	UNCONFINED COMPRESSIVE STRENGTH (psf)
Silty Clay, brown, damp, stiff	CL	1										
		2	x	16	2.1			16		92	6	1810
Silty Clayey Sand; brown, damp, loose; with few gravels	SC/ SM	3										
		4										
		5	x	6				14		98		
		6										
		7										
		8										
Very Sandy Silty Clay; brown, damp, soft; with few pieces of gravel	CL	9										
		10	x	8	1			23		103	7	980
		11										
		12										
		13										
		14										
soft		15	x	10	1.2			22		106	8	1010
		16				▼						
		17				▽						
Clayey Sandy Gravel; brown, moist, very dense to hard	GC	18										
		19										
		20	*	60/5"								

BORING LOG

No. B-2

PROJECT **KOTTINGER RESIDENTIAL DEVELOPMENT** DATE 02/14/2013 LOGGED BY BAA

DRILL RIG Continuous Flight Auger, Truck Mount HOLE DIA. 4" SAMPLER X - Modified California; * - S.P.T

GROUND WATER DEPTH INITIAL FINAL HOLE ELEVATION

DESCRIPTION	SOIL TYPE	DEPTH	SAMPLE	BLOWS PER FOOT	POCKET PEN (tsf)	TORVANE (tsf)	LIQUID LIMIT (%)	WATER CONTENT (%)	PLASTIC LIMIT (%)	DRY DENSITY (pcf)	FAILURE STRAIN (%)	UNCONFINED COMPRESSIVE STRENGTH (psf)
Clayey Sandy Gravel; brown, moist, very dense to hard	GC											
		21										
		22										
		23										
		24										
		25	*	50/5"								
		26										
		27										
hard drilling, more clayey												
		28										
		29										
		30	*	50/8"								
		31										
		32				▼						
		33										
		34				▽						
		35	*	50/10"								
Bottom of hole at 35 feet												
		36										
		37										
		38										
		39										
		40										

BORING LOG

No. B-3

PROJECT **KOTTINGER RESIDENTIAL DEVELOPMENT** DATE 02/14/2013 LOGGED BY BAA

DRILL RIG Continuous Flight Auger, Truck Mount HOLE DIA. 4" SAMPLER X - Modified California; * - S.P.T

GROUND WATER DEPTH INITIAL --- FINAL --- HOLE ELEVATION

DESCRIPTION	SOIL TYPE	DEPTH	SAMPLE	BLOWS PER FOOT	POCKET PEN (tsf)	TORVANE (tsf)	LIQUID LIMIT (%)	WATER CONTENT (%)	PLASTIC LIMIT (%)	DRY DENSITY (pcf)	FAILURE STRAIN (%)	UNCONFINED COMPRESSIVE STRENGTH (psf)
Silty Clay; dark gray brown, damp, stiff	CL	1										
							36		17			
		2	x	15	2			18		96	8	1875
Silty Clay; greenish gray, damp, very stiff	CL	3										
		4										
		5	x	14	2.5			14		98	6	3110
		6										
		7										
		8										
		9										
		10	x	24	3.2			18		101	9	5430
		11										
		12										
		13										
		14										
		15	x	20	2			15		99	8	2685
		16										
		17										
		18										
		19										
Bottom of hole at 20 feet No ground water encountered		20	x	28	3.5			18		101		

BORING LOG

No. B-4

PROJECT **KOTTINGER RESIDENTIAL DEVELOPMENT** DATE 02/14/2013 LOGGED BY BAA

DRILL RIG Continuous Flight Auger, Truck Mount HOLE DIA. 4" SAMPLER X - Modified California; * - S.P.T

GROUND WATER DEPTH INITIAL --- FINAL --- HOLE ELEVATION

DESCRIPTION	SOIL TYPE	DEPTH	SAMPLE	BLOWS PER FOOT	POCKET PEN (tsf)	TORVANE (tsf)	LIQUID LIMIT (%)	WATER CONTENT (%)	PLASTIC LIMIT (%)	DRY DENSITY (pcf)	FAILURE STRAIN (%)	UNCONFINED COMPRESSIVE STRENGTH (psf)
Silty Clay; brown, damp, stiff; with minor sand and gravel	CL	1										
		2	x	2	2			11		101	5	2110
Sandy Silty Clay; brown, damp, medium stiff	CL	3										
		4										
		5	x	7	1.5			11		105	7	1520
		6										
		7										
		8										
Silty Sand with Gravel; brown, damp, medium dense	SM/ SP	9										
		10	*	11								
		11										
		12										
		13										
		14										
		15	x	28				6		110		
		16										
		17										
		18										
		19										
Bottom of hole at 20 feet No ground water encountered		20	*	32								

BORING LOG

No. B-5

PROJECT **KOTTINGER RESIDENTIAL DEVELOPMENT** DATE 02/14/2013 LOGGED BY BAA

DRILL RIG Continuous Flight Auger, Truck Mount HOLE DIA. 4" SAMPLER X - Modified California; * - S.P.T

GROUND WATER DEPTH INITIAL --- FINAL --- HOLE ELEVATION

DESCRIPTION	SOIL TYPE	DEPTH	SAMPLE	BLOWS PER FOOT	POCKET PEN (tsf)	TORVANE (tsf)	LIQUID LIMIT (%)	WATER CONTENT (%)	PLASTIC LIMIT (%)	DRY DENSITY (pcf)	FAILURE STRAIN (%)	UNCONFINED COMPRESSIVE STRENGTH (psf)
Silty Clay; brown, damp, stiff; with pieces of fine gravel	CL	1										
		2	x	30	3			8		120		
Sandy Silty Gravel; light brown, damp, dense	GP	3										
		4										
		5	*	26								
		6										
		7										
		8										
		9										
		10	*	44								
		11										
		12										
		13										
more sandy and silty		14										
Very Sandy Silt; light grayish brown, damp, hard; weathered siltstone	ML	15	*	42	4.5							
		16										
		17										
		18										
		19										
Bottom of hole at 20 feet No ground water encountered		20	*	39	>4.5							

BORING LOG

No. B-6

PROJECT **KOTTINGER RESIDENTIAL DEVELOPMENT** DATE 02/14/2013 LOGGED BY BAA

DRILL RIG Continuous Flight Auger, Truck Mount HOLE DIA. 4" SAMPLER X - Modified California; * - S.P.T

GROUND WATER DEPTH INITIAL --- FINAL --- HOLE ELEVATION

DESCRIPTION	SOIL TYPE	DEPTH	SAMPLE	BLOWS PER FOOT	POCKET PEN (tsf)	TORVANE (tsf)	LIQUID LIMIT (%)	WATER CONTENT (%)	PLASTIC LIMIT (%)	DRY DENSITY (pcf)	FAILURE STRAIN (%)	UNCONFINED COMPRESSIVE STRENGTH (psf)
Very Silty Clay; brwon, damp, medium stiff	CL	1										
							39		19			
		2	x	5	1			15		114	6	780
Sandy Silty Clay; brown, damp, medium stiff to stiff	CL	3										
		4										
		5	x	9	2.2			18		106	8	1620
		6										
		7										
		8										
gravelly		9										
Sandy Silty Clay; gray, damp, stiff	CL	10	x	8	3							
		11										
		12										
		13										
		14										
		15	x	47	4.5							
Very Sandy Gravel; yellowish brown, damp, dense to hard		16										
		17										
		18										
		19										
Bottom of hole at 20 feet No ground water encountered		20	*	41								

BORING LOG

No. B-7

PROJECT **KOTTINGER RESIDENTIAL DEVELOPMENT** DATE 02/14/2013 LOGGED BY BAA

DRILL RIG Continuous Flight Auger, Truck Mount HOLE DIA. 4" SAMPLER X - Modified California; * - S.P.T

GROUND WATER DEPTH INITIAL --- FINAL --- HOLE ELEVATION

DESCRIPTION	SOIL TYPE	DEPTH	SAMPLE	BLOWS PER FOOT	POCKET PEN (tsf)	TORVANE (tsf)	LIQUID LIMIT (%)	WATER CONTENT (%)	PLASTIC LIMIT (%)	DRY DENSITY (pcf)	FAILURE STRAIN (%)	UNCONFINED COMPRESSIVE STRENGTH (psf)
Silty Clay; dark brown, damp, stiff	CL	1										
		2	x	17	2			18		97	8	2785
		3										
Sandy Silty Clay; brown, damp, stiff	CL	4										
		5	x	10	2.5			15		106	6	2050
		6										
		7										
		8										
		9										
moist		10	x	32	3			18		102		
Very Sandy Silty Clay;mottled brown and dark gray, damp, very stiff	CL	11										
		12										
		13										
Sandy Silty Gravel; orange brown, damp very dense	GP	14										
		15	*	30								
		16										
		17										
		18										
		19										
Bottom of hole at 20 feet No ground water encountered		20	*	44								

BORING LOG

No. B-8

PROJECT **KOTTINGER RESIDENTIAL DEVELOPMENT** DATE 02/14/2013 LOGGED BY BAA

DRILL RIG Continuous Flight Auger, Truck Mount HOLE DIA. 4" SAMPLER X - Modified California; * - S.P.T

GROUND WATER DEPTH INITIAL --- FINAL --- HOLE ELEVATION

DESCRIPTION	SOIL TYPE	DEPTH	SAMPLE	BLOWS PER FOOT	POCKET PEN (tsf)	TORVANE (tsf)	LIQUID LIMIT (%)	WATER CONTENT (%)	PLASTIC LIMIT (%)	DRY DENSITY (pcf)	FAILURE STRAIN (%)	UNCONFINED COMPRESSIVE STRENGTH (psf)
Sandy Gravelly Clay; brown, damp, medium stiff	CL	1										
Sandy Clay; brown, damp to moist, medium stiff	CL	2	x	16	1.5							
		3										
		4										
becomes stiff to hard		5	*	36	4							
		6										
		7										
Silty Sandy Gravel; light brown, damp, very dense to hard	GC	8										
		9										
		10	*	39								
		11										
less gravelly; gravel size up to about 1/4 inch		12										
more coarse gravel		13										
Silty Clay; brown, damp, stiff to very stiff		14										
		15	*	24	2							
		16										
		17										
		18										
		19										
Bottom of hole at 20 feet No ground water encountered		20	*	32	3.5							

BORING LOG

No. B-9

PROJECT **KOTTINGER RESIDENTIAL DEVELOPMENT** DATE 02/14/2013 LOGGED BY BAA

DRILL RIG Continuous Flight Auger, Truck Mount HOLE DIA. 4" SAMPLER X - Modified California; * - S.P.T

GROUND WATER DEPTH INITIAL --- FINAL --- HOLE ELEVATION

DESCRIPTION	SOIL TYPE	DEPTH	SAMPLE	BLOWS PER FOOT	POCKET PEN (tsf)	TORVANE (tsf)	LIQUID LIMIT (%)	WATER CONTENT (%)	PLASTIC LIMIT (%)	DRY DENSITY (pcf)	FAILURE STRAIN (%)	UNCONFINED COMPRESSIVE STRENGTH (psf)
Sandy Clay with Gravels; brown, damp, very stiff to hard	CL	1										
							36		18			
		2	x	18	2.5			15		101		
Sandy Clay; brown, damp, very stiff	CL	3										
		4										
		5	x	16	3			17		100		
		6										
		7										
		8										
		9										
		10	x	19	3.5			14		102		
		11										
		12										
		13										
Gravelly Clay; brown, damp, very stiff	CL	14										
		15	x	21	3.5			16		103		
		16										
		17										
more gravels		18										
		19										
		20	x	24	3							

BORING LOG

No. B-9

PROJECT **KOTTINGER RESIDENTIAL DEVELOPMENT** DATE 02/14/2013 LOGGED BY BAA

DRILL RIG Continuous Flight Auger, Truck Mount HOLE DIA. 4" SAMPLER X - Modified California; * - S.P.T

GROUND WATER DEPTH INITIAL --- FINAL --- HOLE ELEVATION

DESCRIPTION	SOIL TYPE	DEPTH	SAMPLE	BLOWS PER FOOT	POCKET PEN (tsf)	TORVANE (tsf)	LIQUID LIMIT (%)	WATER CONTENT (%)	PLASTIC LIMIT (%)	DRY DENSITY (pcf)	FAILURE STRAIN (%)	UNCONFINED COMPRESSIVE STRENGTH (psf)
Very Sandy Clay with Gravel; brown, damp, very stiff	CL	21										
		22										
		23										
		24										
		25	*	32	4							
		26										
		27										
		28										
		29										
		30	*	38	4.5							
Bottom of hole at 30 feet No ground water encountered		31										
		32										
		33										
		34										
		35										
		36										
		37										
		38										
		39										
		40										

BORING LOG

No. B-10

PROJECT **KOTTINGER RESIDENTIAL DEVELOPMENT** DATE 02/14/2013 LOGGED BY BAA

DRILL RIG Continuous Flight Auger, Truck Mount HOLE DIA. 4" SAMPLER X - Modified California; * - S.P.T

GROUND WATER DEPTH INITIAL --- FINAL --- HOLE ELEVATION

DESCRIPTION	SOIL TYPE	DEPTH	SAMPLE	BLOWS PER FOOT	POCKET PEN (tsf)	TORVANE (tsf)	LIQUID LIMIT (%)	WATER CONTENT (%)	PLASTIC LIMIT (%)	DRY DENSITY (pcf)	FAILURE STRAIN (%)	UNCONFINED COMPRESSIVE STRENGTH (psf)
Sandy Silty Clay; brown, damp	CL											
stiff		1										
		2	x	18	2			16		99	8	2340
		3										
		4										
		5	x	42	4			18		102	9	4510
		6										
Very Silty Sand; light brown, damp	SM											
very dense to hard, weathered sandstone		7										
		8										
		9										
		10	x	48								
		11										
		12										
		13										
		14										
sandstone/siltstone		15	*	56								
		16										
		17										
		18										
		19										
Bottom of hole at 20 feet												
No ground water encountered		20	*	51								

BORING LOG

No. B-11

PROJECT **KOTTINGER RESIDENTIAL DEVELOPMENT** DATE 02/14/2013 LOGGED BY BAA

DRILL RIG Hand Auger HOLE DIA. 4" SAMPLER X - Modified California; * - S.P.T

GROUND WATER DEPTH INITIAL --- FINAL --- HOLE ELEVATION

DESCRIPTION	SOIL TYPE	DEPTH	SAMPLE	BLOWS PER FOOT	POCKET PEN (tsf)	TORVANE (tsf)	LIQUID LIMIT (%)	WATER CONTENT (%)	PLASTIC LIMIT (%)	DRY DENSITY (pcf)	FAILURE STRAIN (%)	UNCONFINED COMPRESSIVE STRENGTH (psf)
Sandy Silty Clay; brown, moist, stiff	CL	1										
		2	x					16				
		3										
		4										
		5	x					17				
Bottom of hole at 5 feet No ground water encountered		6										
		7										
		8										
		9										
		10										
		11										
		12										
		13										
		14										
		15										
		16										
		17										
		18										
		19										
		20										

APPENDIX B

Laboratory Test Results

PLASTICITY INDEX

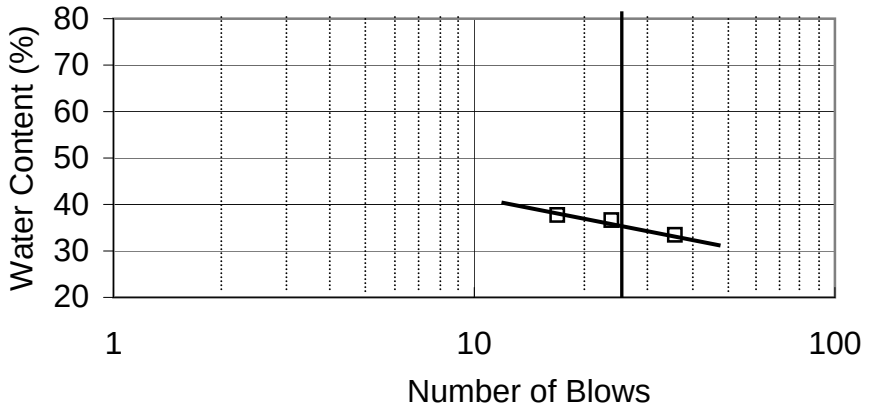
TEST DESIGNATION: ASTM D4318 OR CAL 204

Project Name:	Kottinger Residential Development	Project No.:	3591
Sample No.:	B1 - 2 feet	Lab No.:	
Location		Test Date:	03/03/2013
Description:	Silty Clay	Tested By:	EAA

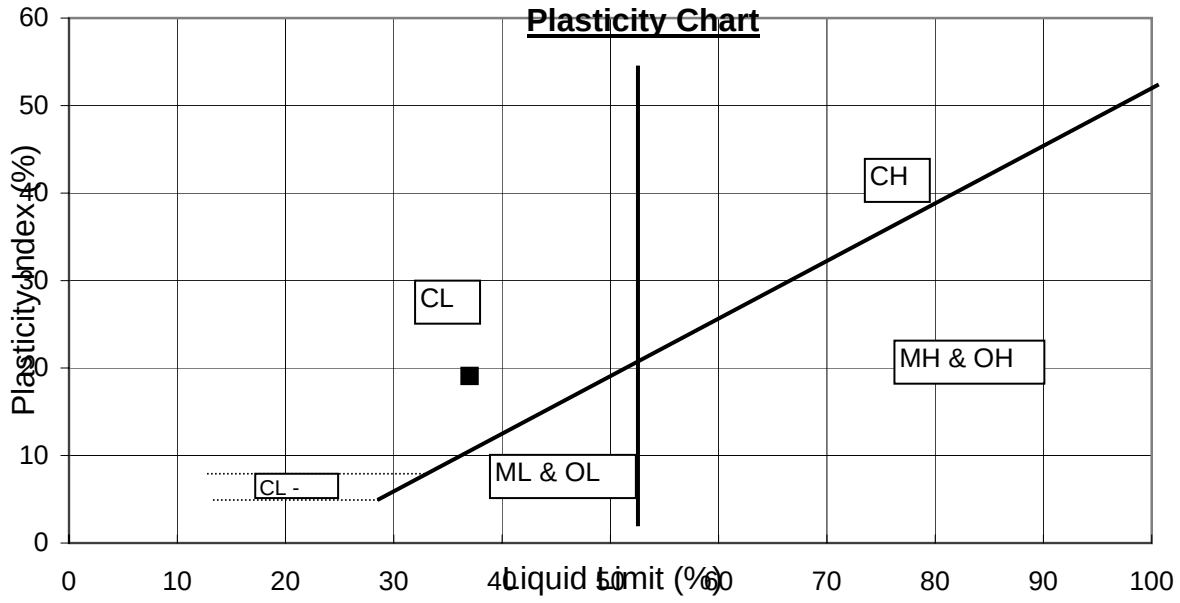
TEST DATA

Liquid Limit					Plastic limit			Water Content
Number of Blows	36	24	17					
Tare Number	3	11	32		6			
Tare + Wet Wt (gm)	45.90	45.70	44.80		38.00			
Tare + Dry Wt (gm)	37.20	36.10	35.10		33.70			
Tare Wt (gm)	11.20	9.90	9.40		9.70			
Wt of Water (gm)	8.70	9.60	9.70		4.30			
Soil Dry Wt (gm)	26.00	26.20	25.70		24.00			
Water Content (%)	33.46	36.64	37.74		17.92			
			Average		17.92			

Liquid Limit Test



LL	PL	PI
37	18	19



PLASTICITY INDEX

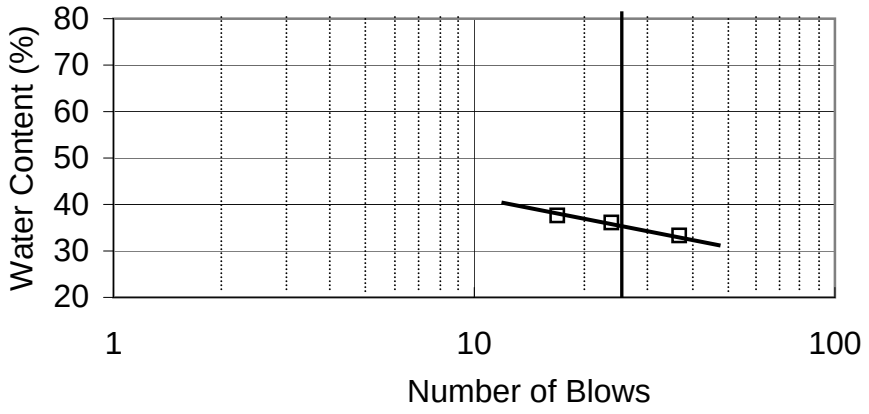
TEST DESIGNATION: ASTM D4318 OR CAL 204

Project Name:	Kottinger Residential Development	Project No.:	3591
Sample No.:	B3 - 2 feet	Lab No.:	
Location		Test Date:	03/03/2013
Description:	Silty Clay	Tested By:	EAA

TEST DATA

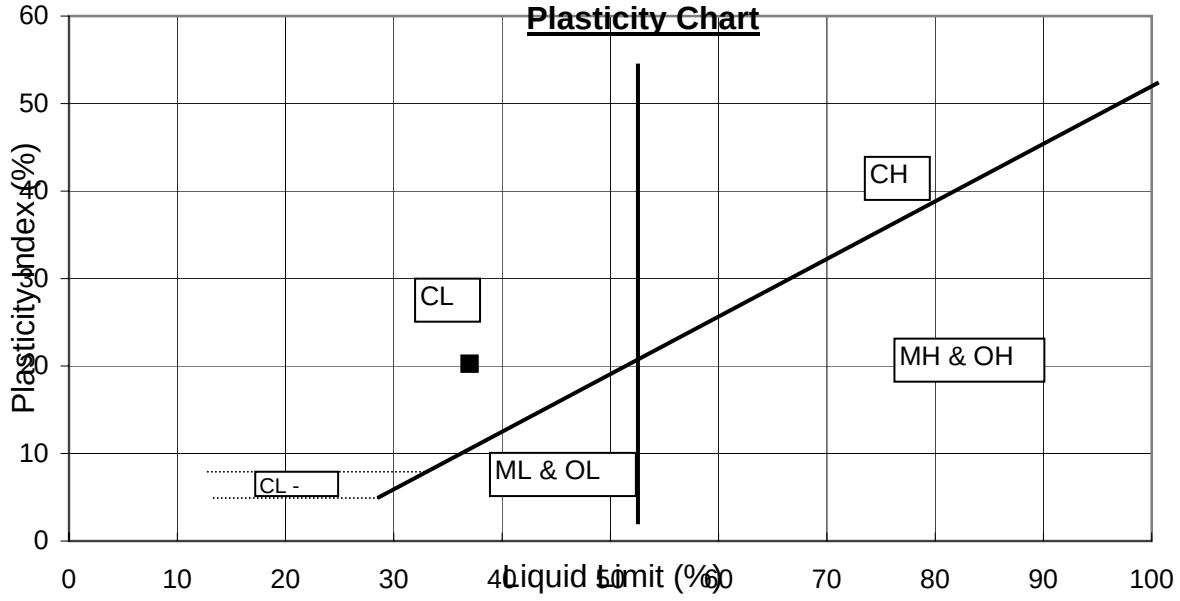
Liquid Limit					Plastic limit			Water Content
Number of Blows	37	24	17					
Tare Number	6	12	9		14			
Tare + Wet Wt (gm)	45.60	45.70	44.50		37.60			
Tare + Dry Wt (gm)	37.00	36.20	35.20		33.60			
Tare Wt (gm)	11.20	9.90	10.50		9.70			
Wt of Water (gm)	8.60	9.50	9.30		4.00			
Soil Dry Wt (gm)	25.80	26.30	24.70		23.90			
Water Content (%)	33.33	36.12	37.65		16.74			
			Average		16.74			

Liquid Limit Test



LL	PL	PI
37	17	20

Plasticity Chart



PLASTICITY INDEX

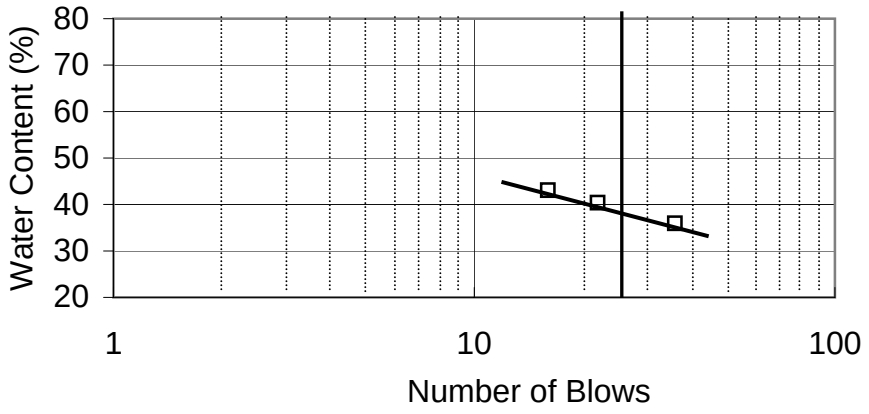
TEST DESIGNATION: ASTM D4318 OR CAL 204

Project Name:	Kottinger Residential Development	Project No.:	3591
Sample No.:	B6 - 2 feet	Lab No.:	
Location		Test Date:	03/03/2013
Description:	Sandy Silty Clay	Tested By:	EAA

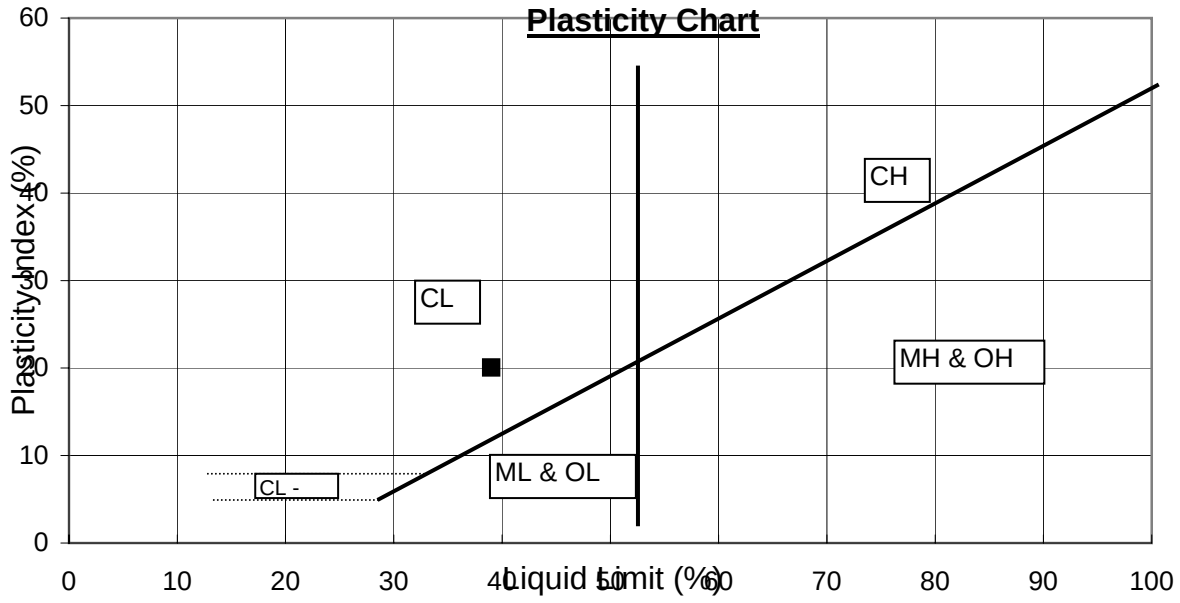
TEST DATA

Liquid Limit					Plastic limit			Water Content
Number of Blows	36	22	16					
Tare Number	A	16	21		22			
Tare + Wet Wt (gm)	46.10	46.50	46.05		37.90			
Tare + Dry Wt (gm)	36.90	36.00	35.30		33.40			
Tare Wt (gm)	11.30	10.01	10.35		9.65			
Wt of Water (gm)	9.20	10.50	10.75		4.50			
Soil Dry Wt (gm)	25.60	25.99	24.95		23.75			
Water Content (%)	35.94	40.40	43.09		18.95			
			Average		18.95			

Liquid Limit Test



LL	PL	PI
39	19	20



PLASTICITY INDEX

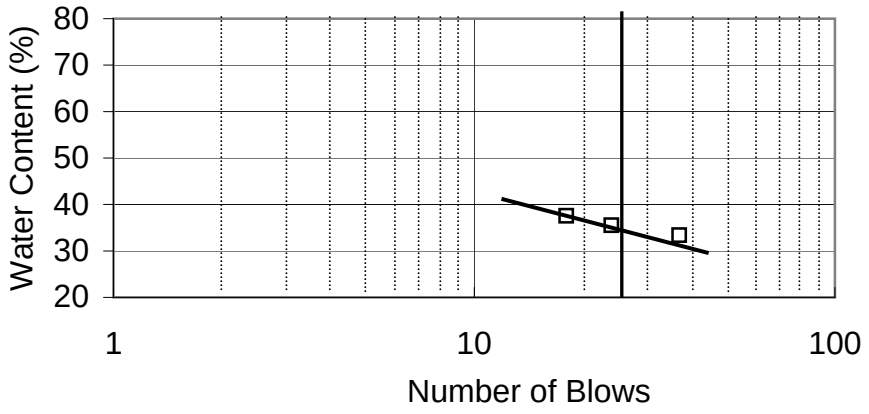
TEST DESIGNATION: ASTM D4318 OR CAL 204

Project Name:	Kottinger Residential Development	Project No.:	3591
Sample No.:	B9 - 1 1/2 feet	Lab No.:	
Location		Test Date:	03/03/2013
Description:	Sandy Silty Clay	Tested By:	EAA

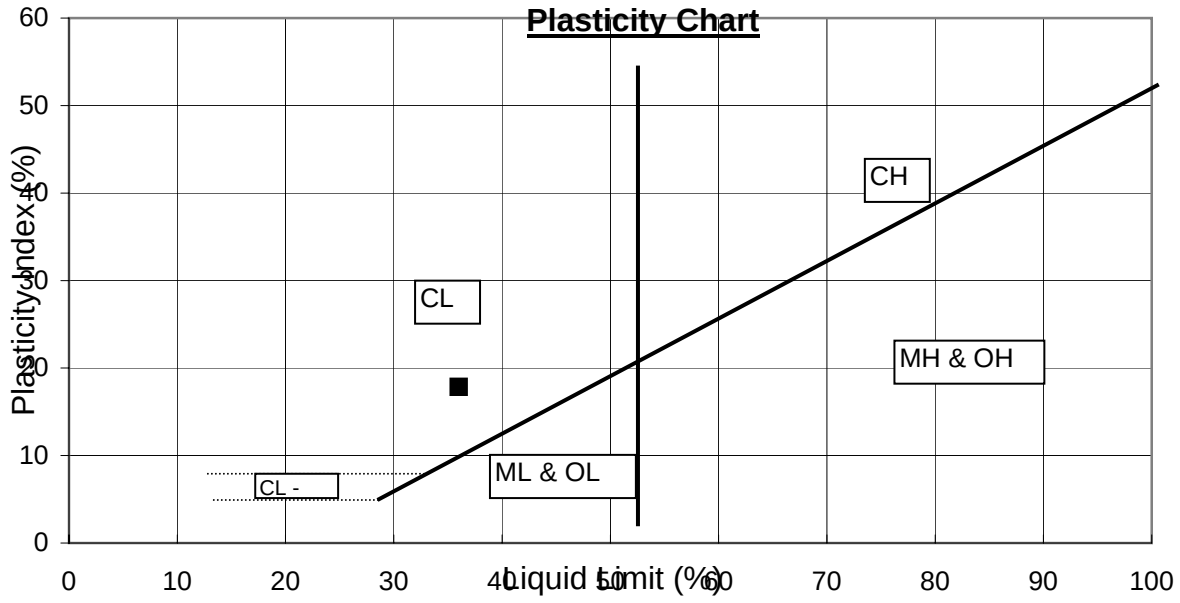
TEST DATA

	Liquid Limit				Plastic limit			Water Content
Number of Blows	37	24	18					
Tare Number	5	8	25		31			
Tare + Wet Wt (gm)	45.60	45.70	44.50		37.82			
Tare + Dry Wt (gm)	37.00	36.30	35.20		33.50			
Tare Wt (gm)	11.25	9.85	10.45		9.70			
Wt of Water (gm)	8.60	9.40	9.30		4.32			
Soil Dry Wt (gm)	25.75	26.45	24.75		23.80			
Water Content (%)	33.40	35.54	37.58		18.15			
			Average		18.15			

Liquid Limit Test

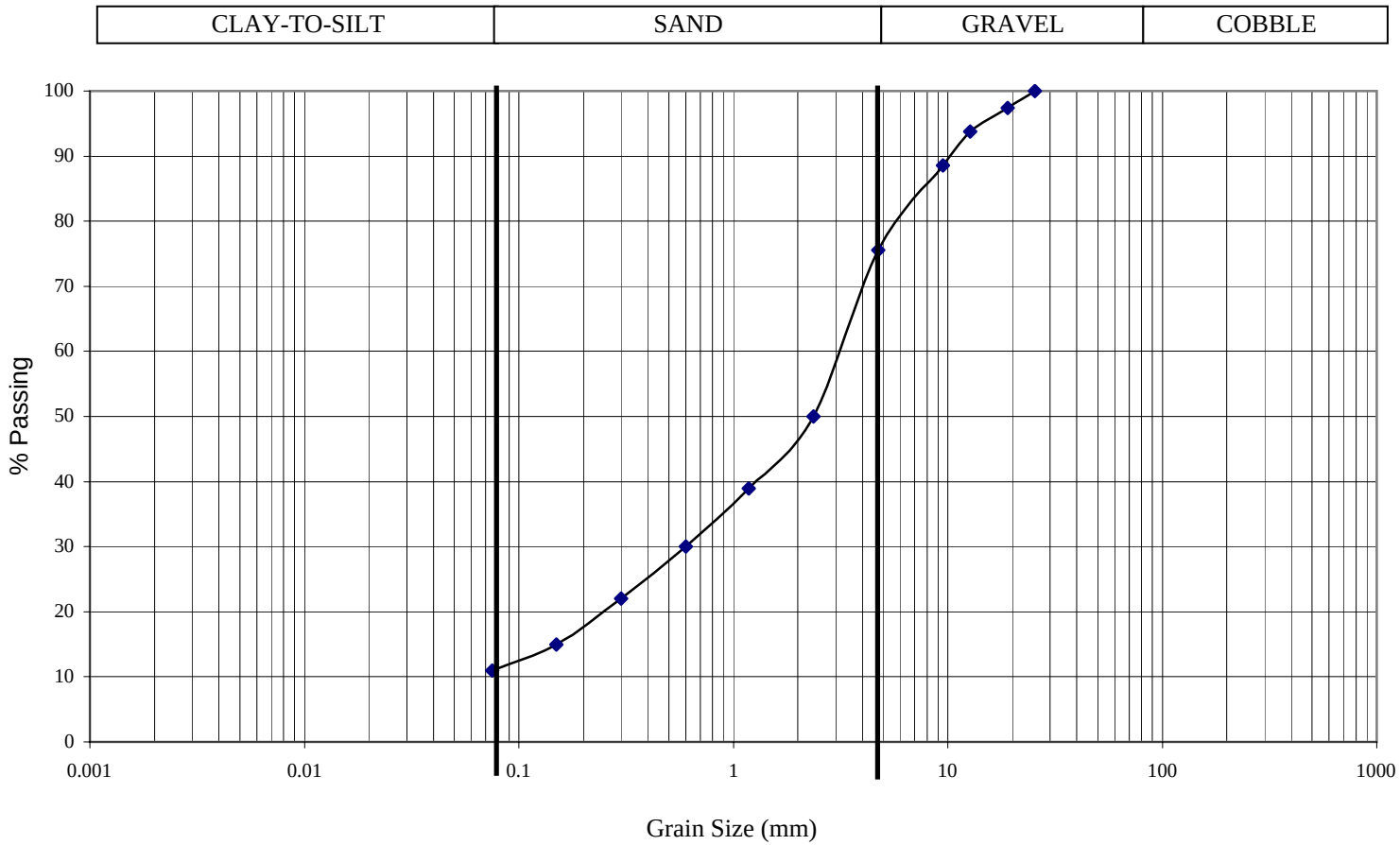


LL	PL	PI
36	18	18



GRAIN SIZE DISTRIBUTION

Project:	Kottinger Residential Development	Date:	03/01/2013
Sample	B4 @ 15 feet	Project #:	3591
		Lab # :	
Material Description:	Silty Sand with Gravel	Date Tested:	



Corrosivity Test Summary

CTL # 547-032 **Date:** 2/22/2013 **Tested By:** PJ **Checked:** PJ

Client: AMSO Consulting Engineers **Project:** Kottinger Dr. Apts. **Proj. No:** 3591

Remarks:

Sample Location or ID			Resistivity @ 15.5 °C (Ohm-cm)			Chloride	Sulfate-(water soluble)		pH	ORP (Redox)		Sulfide	Moisture	Soil Visual Description
Boring	Sample, No.	Depth, ft.	As Rec.	Minimum	100% Saturated	mg/kg Dry Wt.	mg/kg Dry Wt.	% Dry Wt.		E_H (mv)	At Test Temp °C	Qualitative by Lead	% At Test	
			ASTM G57	Cal 643	ASTM G57	ASTM D4327 / Cal 422-mod.	ASTM D4327 / Cal 417-mod.		ASTM G51	ASTM G200		Acetate Paper	ASTM D2216	
B2	-	2	-	-	2,311	78	46	0.0046	6.8	479	22	Negative	15.4	Brown Clayey SAND
B7	-	3	-	-	156	38	8	0.0008	6.8	497	22	Negative	19.1	Mottled Brown Sandy CLAY
B10	-	5	-	-	766	348	212	0.0212	6.4	508	23	Negative	12.9	Yellowish Brown Clayey SAND

Appendix E – Hazards and Hazardous Materials

- **AEI Consultants.** *Phase I Environmental Site Assessment, 240 & 251 Kottinger Dr, 4138 Vineyard Avenue & 4153 Regalia Court, Pleasanton, Alameda County, California 94566.* Walnut Creek, CA : s.n., January 11, 2013. AEI Project No. 315504.

AEI Consultants
Environmental & Engineering Services

January 11, 2013

PHASE I
ENVIRONMENTAL SITE ASSESSMENT

Property Identification:
240 & 251 Kottinger Dr, 4138 Vineyard Avenue &
4153 Regalia Court
Pleasanton, Alameda County, California 94566

AEI Project No. 315504

Prepared for:
MidPen Housing Corporation
303 Vintage Drive, Suite 250
Foster City, California 94404

Prepared by:
AEI Consultants
2500 Camino Diablo
Walnut Creek, California 94597
(925) 746-6000

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PROJECT SUMMARY

240 & 251 Kottinger Dr, 4138 Vineyard Avenue & 4153 Regalia Court, Pleasanton, Alameda County, California

Report Section		No Further Action	REC	HREC	BER	Recommended Action
2.1	Current use of subject property	X				
2.2	Adjoining property information	X				
3.1	Historical Summary	X				
4.0	Regulatory Agency Records Review	X				
5.0	Regulatory Database Records Review	X				
6.3	Previous Reports	X				
7.0	Site Inspection and Reconnaissance	X				
7.2.1	Asbestos-Containing Materials	X			X	
7.2.2	Lead-Based Paint	X			X	
7.2.3	Radon	X				
7.2.4	Lead in Drinking Water	X				
7.2.5	Mold	X				

EXECUTIVE SUMMARY

AEI Consultants (AEI) was retained by MidPen Housing Corporation to conduct a Phase I Environmental Site Assessment (ESA), in general conformance with the scope and limitations of ASTM Standard Practice E1527-05 and the Environmental Protection Agency Standards and Practices for All Appropriate Inquiries (40 CFR Part 312) for the properties located at 240 & 251 Kottinger Drive, 4138 Vineyard Avenue, and 4153 Regalia Court in the City of Pleasanton, Alameda County, California. Any exceptions to, or deletions from, this practice are described in Section 1.3 of this report.

PROPERTY DESCRIPTION

The subject property, which consists of two city owned senior housing developments, a vacant lot and a city owned building, is located on the north and south sides of Kottinger Drive in a mixed commercial and residential area of Pleasanton, California. The property totals approximately 5.9 acres and is improved with 29 one-story buildings totaling approximately 54,300 square feet. All buildings are of wood frame, slab-on-grade construction. The subject property is currently occupied by a city owned building (Regalia House), Kottinger Place senior apartments (50 units), Pleasanton Gardens senior apartments (40 units) and a vacant lot. On-site operations include senior apartments and a building that is rented out for events. In addition to the subject property buildings, the property is improved with tenant garden areas, asphalt-paved parking areas and associated landscaping.

During the site reconnaissance, hazardous materials consisting of latex paints, stains, household cleaning chemicals and maintenance chemicals were observed in connection with maintenance and cleaning of the tenant units. No environmental concerns associated with the storage and/or use of these materials was noted during the site reconnaissance or during the review of regulatory records. Please refer to Section 7.1 for additional information.

The Pleasanton Gardens property (250 Kottinger Drive) was developed with the current improvements in 1969. Prior to the current site improvements, the subject property was identified to consist of agricultural land with a farmhouse. The Kottinger Place property (241 Kottinger Drive) was developed with the current improvements in 1973. Prior to the current site improvements, the subject property was identified to consist of wartime housing called Kottinger Village, constructed in 1943. The Regalia Court property (4153 Regalia Court) was constructed in 1948 and has been owned by the city of Pleasanton. It is rented for events.

The vacant lot (4138 Vineyard Avenue) was occupied by a residence and it was demolished in 2005 when purchased by the city of Pleasanton

A portion of the subject property (4138 Vineyard Avenue) was identified in the regulatory database as a HAZNET site, and is further discussed in Section 5.1.

Due to the irregular shape of the subject property, the following table is divided into two parts, north of Kottinger Drive (240 Kottinger Drive, 4153 Regalia Court, and 4138 Vineyard Avenue) and south of Kottinger Drive (251 Kottinger Drive). The immediately surrounding properties consist of the following:

North of Kottinger Drive

Direction from Site	Address-Tenant/Use
North	Kottinger Village Park followed by Vineyard Avenue and residences at 4095, 4143, 4141, and 4149 Vineyard Avenue.
South	Kottinger Village Park Residences at 229, 266, 286, 302, 320, 348, and 356 Kottinger Drive Pleasanton Gardens Apartments (251 Kottinger Drive) Residence at 4304 Second Street
East	Kottinger Village Park
West	Residences at 228, 230, 232, and 234 Kottinger Drive Benson Rodgers Architects (4156 Vineyard Avenue) Residences at 4158, 41560, 4162, and 4162 Vineyard Avenue

South of Kottinger Drive

Direction from Site	Address-Tenant/Use
North	Kottinger Place Apartments (240 Kottinger Drive) (Subject Property) Residence at 266 Kottinger Drive
South	Residence at 4356 Second Street
East	Residences at 253, 255, 265, 269, and 271 Kottinger Drive
West	Residences at 4310, 4318, 4326, 4332, 4341, and 4346 Second Street

No adjacent sites were identified in the regulatory database.

Based upon topographic map interpretation, the direction of groundwater flow beneath the subject property is inferred to be to the northwest. Based on nearby monitoring wells, groundwater is presumed to be present at an estimated depth of 30-35 feet below ground surface (bgs).

FINDINGS

Recognized Environmental Conditions (RECs) are defined by the ASTM Standard Practice E1527-05 as the presence or likely presence of any hazardous substances or petroleum products on a property 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. AEI's assessment has revealed the following RECs associated with the subject property or nearby properties:

- No on-site RECs were identified during the course of this assessment.

Historical Recognized Environmental Conditions (HRECs) are defined by the ASTM Standard Practice E1527-05 as an environmental condition which in the past would have been considered a recognized environmental condition, but which may or may not be considered a recognized environmental condition currently. AEI's assessment has revealed the following HRECs associated with the subject property or nearby properties:

- No on-site HRECs were identified during the course of this assessment.

De Minimis Environmental Conditions include environmental concerns identified by AEI that warrant discussion but do not qualify as RECs, as defined by the ASTM Standard Practice E1527-05. AEI's assessment has revealed the following de minimis environmental conditions associated with the subject property or nearby properties:

- De minimis staining of asphalt-paved areas due to the normal operation of automobiles was observed.

Business Environmental Risks (BERs) include risks which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of the subject property, not necessarily limited to those environmental issues required to be investigated in the standard ASTM scope. BERs may affect the liabilities and financial obligations of the client, the health & safety of site occupants, and the value and marketability of the subject property. AEI's assessment has revealed the following BERs associated with the subject property or nearby properties:

- Based on the age of the subject property buildings, there is a potential that asbestos-containing materials (ACMs) are present. All observed suspect ACMs were in good condition and are not expected to pose a health and safety concern to the occupants of the subject property at this time. In the event that building renovation or demolition activities are planned, an asbestos survey adhering to the Asbestos Hazard Emergency Response Act (AHERA) sampling protocol should be performed prior to demolition or renovation activities that may disturb suspect ACMs.

- Based on the age of the subject property buildings, there is a potential that lead-based paint (LBP) is present. All observed painted surfaces were in good condition and are not expected to pose a health and safety concern to the occupants of the subject property at this time. Local regulations may apply to LBP in association with building demolition/renovations and worker/occupant protection. Actual material samples would need to be collected or an XRF survey performed in order to determine if LBP is present. It should be noted that construction activities that disturb materials or paints containing *any amount* of lead may be subject to certain requirements of the OSHA lead standard contained in 29 CFR 1910.1025 and 1926.62.

CONCLUSIONS, OPINIONS AND RECOMMENDATIONS

We have performed a Phase I Environmental Site Assessment for the property located at 240 & 251 Kottinger Drive, 4153 Regalia Court, and 4138 Vineyard Avenue in the City of Pleasanton, Alameda County, California, in general conformance with the scope and limitations of ASTM Standard Practice E1527-05 and the Environmental Protection Agency Standards and Practices for All Appropriate Inquiries (40 CFR Part 312). Any exceptions to, or deletions from, this practice are described in Section 1.3 of this report. This assessment has revealed no evidence of RECs in connection with the property. AEI recommends no further investigations for the subject property at this time.

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1.0 INTRODUCTION

This report documents the methods and findings of the Phase I Environmental Site Assessment (ESA) performed in general conformance with the scope and limitations of ASTM Standard Practice E1527-05 and the Environmental Protection Agency Standards and Practices for All Appropriate Inquiries (40 CFR Part 312) for the properties located at 240 & 251 Kottinger Drive, 4138 Vineyard Avenue and 4153 Regalia Court in the City of Pleasanton, Alameda County, California (Figure 1: Site Location Map, Figure 2: Site Map, and Appendix A: Property Photographs).

1.1 SCOPE OF WORK

The purpose of the Phase I Environmental Site Assessment is to assist the client in identifying potential environmental liabilities associated with the presence of any hazardous substances or petroleum products, their use, storage, and disposal at and in the vicinity of the subject property, as well as regulatory non-compliance that may have occurred at the subject property. Property assessment activities focused on: 1) a review of federal, state, tribal and local databases that identify and describe underground fuel tank sites, leaking underground fuel tank sites, hazardous waste generation sites, and hazardous waste storage and disposal facility sites within the ASTM approximate minimum search distance; 2) a property and surrounding site reconnaissance, and interviews with the past and present owners and current occupants and operators to identify potential environmental contamination; and 3) a review of historical sources to help ascertain previous land use at the site and in the surrounding area.

The goal of AEI Consultants in conducting the Phase I Environmental Site Assessment was to identify the presence or likely presence of any hazardous substances or petroleum products on the property that may indicate an existing release, a past release, or a material threat of a release of any hazardous substance or petroleum product into the soil, groundwater, or surface water of the property.

1.2 SIGNIFICANT ASSUMPTIONS

The following assumptions are made by AEI Consultants in this report. AEI Consultants relied on information derived from secondary sources including governmental agencies, the client, designated representatives of the client, property contact, property owner, property owner representatives, computer databases, and personal interviews. AEI Consultants has reviewed and evaluated the thoroughness and reliability of the information derived from secondary sources including government agencies, the client, designated representatives of the client, property contact, property owner, property owner representatives, computer databases, or personal interviews. It appears that all information obtained from outside sources and reviewed for this assessment is thorough and reliable. However, AEI cannot guarantee the thoroughness or reliability of this information.

Groundwater flow and depth to groundwater, unless otherwise specified by on-site well data, or well data from adjacent sites are assumed based on contours depicted on the United States Geological Survey topographic maps. AEI Consultants assumes the property has been correctly and accurately identified by the client, designated representative of the client, property contact, property owner, and property owner's representatives.

1.3 LIMITATIONS

Property conditions, as well as local, state, tribal and federal regulations can change significantly over time. Therefore, the recommendations and conclusions presented as a result of this study apply strictly to the environmental regulations and property conditions existing at the time the study was performed. Available information has been analyzed using currently accepted assessment techniques and it is believed that the inferences made are reasonably representative of the property. AEI Consultants makes no warranty, expressed or implied, except that the services have been performed in accordance with generally accepted environmental property assessment practices applicable at the time and location of the study.

Considerations identified by ASTM as beyond the scope of a Phase I ESA that may affect business environmental risk at a given property include the following: asbestos-containing materials, radon, lead-based paint, lead in drinking water, wetlands, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, mold, vapor intrusion, and high voltage lines. These environmental issues or conditions may warrant assessment based on the type of the property transaction; however, they are considered non-scope issues under ASTM Standard Practice E1527-05.

If requested by the client, these non-scope issues are discussed in Section 7.2. Otherwise, the purpose of this assessment is solely to satisfy one of the requirements for qualification of the innocent landowner defense, contiguous property owner or bona fide prospective purchaser under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). ASTM Standard Practice E1527-05 and the EPA Standards and Practices for All Appropriate Inquiries (40 CFR Part 312) constitute the "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice" as defined in:

1) 42 U.S.C § 9601(35)(B), referenced in the ASTM Standard Practice E1527-05.

2) Sections 101(35)(B) (ii) and (iii) of CERCLA and referenced in the EPA Standards and Practices for All Appropriate Inquiries (40 CFR Part 312).

3) 42 U.S.C. 9601(40) and 42 U.S.C. 9607(q).

The Phase I Environmental Site Assessment is not, and should not be construed as, a warranty or guarantee about the presence or absence of environmental contaminants that may affect the property. Neither is the assessment intended to assure clear title to the property in question. The sole purpose of assessment into property title records is to ascertain a historical basis of prior land use. All findings, conclusions, and recommendations stated in this report are based upon facts, circumstances, and industry-accepted procedures for such services as they existed at the time this report was prepared (i.e., federal, state, and local laws, rules, regulations, market conditions, economic conditions, political climate, and other applicable matters). All findings, conclusions, and recommendations stated in this report are based on the data and information provided, and observations and conditions that existed on the date and time of the property visit.

Responses received from local, state, or federal agencies or other secondary sources of information after the issuance of this report may change certain facts, findings, conclusions, or circumstances to the report. A change in any fact, circumstance, or industry-accepted

procedure upon which this report was based may adversely affect the findings, conclusions, and recommendations expressed in this report.

1.4 LIMITING CONDITIONS

The performance of this Phase I Environmental Site Assessment was limited by the following conditions:

- The User did not complete the ASTM User questionnaire or provide he User information to AEI. AEI assumes that qualification for the LLPs is being established by the User in documentation outside of this investigation.

- Due to the size of the property, a representative sample of interior spaces was inspected by AEI. Due to the residential nature of occupancy, this limited inspection method is expected to be adequate for the purpose of this assessment.

1.5 DATA GAPS AND DATA FAILURE

According to ASTM E1527-05, data gaps occur when the Environmental Professional is unable to obtain information required, despite good faith efforts to gather such information.

Data failure is one type of data gap. According to ASTM E1527-05 "data failure occurs when all of the standard historical sources that are reasonably ascertainable and likely to be useful have been reviewed and yet the objectives have not been met". Pursuant to ASTM Standards, historical sources are required to document property use back to the property's first developed use or back to 1940, whichever is earlier.

No significant data gaps were identified during the course of this assessment.

1.6 RELIANCE

All reports, both verbal and written, are for the benefit of MidPen Housing Corporation. This report has no other purpose and may not be relied upon by any other person or entity without the written consent of AEI. Either verbally or in writing, third parties may come into possession of this report or all or part of the information generated as a result of this work. In the absence of a written agreement with AEI granting such rights, no third parties shall have rights of recourse or recovery whatsoever under any course of action against AEI, its officers, employees, vendors, successors or assigns. Reliance is provided in accordance with AEI's Proposal and Standard Terms & Conditions executed by MidPen Housing Corporation on December 18, 2012. The limitation of liability defined in the Terms and Conditions is the aggregate limit of AEI's liability to the client and all relying parties.

2.0 SITE AND VICINITY DESCRIPTION

2.1 SITE LOCATION AND DESCRIPTION

The subject property, which consists of two city owned senior housing developments, a vacant lot and a city owned building, is located on the north and south sides of Kottinger Drive in a mixed commercial and residential area of Pleasanton, California. The property totals approximately 5.9 acres and is improved with 29 one-story buildings totaling approximately 54,300 square feet. All buildings are of wood frame, slab-on-grade construction. The subject property is currently occupied by a city owned building (Regalia House), Kottinger Place senior apartments (50 units), Pleasanton Gardens senior apartments (40 units) and a vacant lot. On-site operations include senior apartments and a building that is rented out for events. In addition to the subject property buildings, the property is improved with tenant garden areas, asphalt-paved parking areas and associated landscaping.

The Assessor's Parcel Numbers (APNs) for the subject property are 94-95-33, 94-19-17, and 94-95-17. According to Ms. Macker and Ms. Ochoa, heating and cooling systems on the subject property are fueled by natural gas and electricity provided by Pacific Gas & Electric, and potable water and sewage disposal are provided by the City of Pleasanton.

Refer to Figure 1: Site Location Map, Figure 2: Site Map, and Appendix A: Property Photographs for site location.

2.2 SITE AND VICINITY CHARACTERISTICS

The subject property is located in a residential area of Pleasanton. Since the shape of the subject property is highly irregular, the surrounding properties table is broken into two parts. The immediately surrounding properties consist of the following:

North of Kottinger Drive

Direction from Site	Address-Tenant/Use
North	Kottinger Village Park followed by Vineyard Avenue and residences at 4095, 4143, 4141, and 4149 Vineyard Avenue.
South	Kottinger Village Park Residences at 229, 266, 286, 302, 320, 348, and 356 Kottinger Drive Pleasanton Gardens Apartments (251 Kottinger Drive) (Subject Property) Residence at 4304 Second Street
East	Kottinger Village Park
West	Residences at 228, 230, 232, and 234 Kottinger Drive Benson Rodgers Architects (4156 Vineyard Avenue) Residences at 4158, 41560, 4162, and 4162 Vineyard Avenue

South of Kottinger Drive

Direction from Site	Address-Tenant/Use
North	Kottinger Place Apartments (240 Kottinger Drive) (Subject Property) Residence at 266 Kottinger Drive
South	Residence at 4356 Second Street
East	Residences at 253, 255, 265, 269, and 271 Kottinger Drive
West	Residences at 4310, 4318, 4326, 4332, 4341, and 4346 Second Street

No adjacent sites were identified in the regulatory database

2.3 PHYSICAL SETTING

Geology: According to information obtained from the United States Geological Survey (USGS), the area surrounding the subject property is underlain by alluvium, lake, playa, and terrace deposits, unconsolidated and semi-consolidated of the Pleistocene-era. Based on a review of the United States Department of Agriculture (USDA) Soil Survey for the area of the subject property, the soils in the vicinity of the subject property are classified as the Positas Series. Soils from this series are characterized as a gravelly loam.	
USGS Topographic Map:	Livermore Quadrangle
Nearest surface water to subject property:	Unnamed seasonal creek/30-60 feet south
Gradient Direction/Source:	Northwest/Topographic map interpretation and on-site observations
Estimated Depth to Groundwater/Source:	30-35 feet bgs/Nearby monitoring wells

3.0 HISTORICAL REVIEW OF SITE AND VICINITY

3.1 HISTORICAL SUMMARY

Reasonably ascertainable standard historical sources as outlined in ASTM Standard E1527-05 were used to determine previous uses and occupancies of the subject property that are likely to have led to RECs in connection with the subject property. A chronological summary of historical data found, including but not limited to aerial photographs, historic city directories, Sanborn fire insurance maps and agency records is as follows:

Regalia House (4153 Regalia Court)

Date Range	Subject Property Description/Use	Sources
Previous to 1943	Agricultural land	Aerial photographs
1943-present	Regalia House meeting facility	Aerial photographs, information from the City of Pleasanton Support Services, Housing Authority and the local historical society.

The area was part of the ranch of John Kottinger starting in the 1850s. In 1943, this structure and the land to the south and east was developed as Kottinger Village as wartime housing. The regalia House has been used as a meeting and rental facility and housed the Pleasanton Women's Club for many years. In 1972-1973, the other buildings were demolished and replaced by the Kottinger Place Senor Apartments and the Kottinger Village Park. The Regalia House is the only building remaining from the 1943 Kottinger Village development.

4138 Vineyard Avenue

Date Range	Subject Property Description/Use	Sources
Previous to 1948	Agricultural land	Aerial photographs
1948-2011	Residence	City of Pleasanton Building Department
2011-present	Vacant land	Observations, discussion with City of Pleasanton employees.

The area was part of the ranch of John Kottinger starting in the 1850s. In 1948, a residence was constructed on the northern portion of this lot. In 2011, the City of Pleasanton acquired the property and demolished the residence. As of the date of this report, it is still vacant land.

Kottinger Place (240 Kottinger Drive)

Date Range	Subject Property Description/Use	Source(s)
Previous to 1943	Agricultural land	Aerial photographs
1943-1972	Kottinger Village	Aerial photographs, information from the City of Pleasanton Support Services, Pleasanton Housing Authority and the local historical society.
1972-present	Kottinger Place Senior Housing	Aerial photographs, Building Department records, Pleasanton Housing Authority records, and observations

The area was part of the ranch of John Kottinger starting in the 1850s. It remained agricultural until 1943 when wartime housing, Kottinger Village, was constructed on this property and the land to the east and south. In 1972, the structures remaining were demolished and the current improvements, the Kottinger Place Senior Apartments were constructed.

Pleasanton Gardens Senior Apartments (251 Kottinger Drive)

Date Range	Subject Property Description/Use	Source(s)
Previous to 1969	Agricultural land, a residence and associated agricultural buildings.	Aerial photographs and Building Records
1969-present	Pleasanton Gardens Senior Apartments	Aerial photographs, Building Department records, Pleasanton Housing Authority records, and observations

The area was part of the ranch of John Kottinger starting in the 1850s. It remained agricultural until 196, when the current improvements, the Pleasanton Gardens Senior Apartments, were constructed.

No potential environmental concerns were identified in association with the current or historical use of the subject property.

If available, copies of historical sources are provided in the report appendices.

3.2 AERIAL PHOTOGRAPH REVIEW

AEI Consultants reviewed aerial photographs of the subject property and surrounding area. Aerial photographs were reviewed for the following years:

Date	Scale	Subject Property Description	Surrounding Area Descriptions
1939	1:500	Agricultural land north of Kottinger Drive. Agricultural land and a residence south of Kottinger Drive.	**North:** Vineyard Avenue and agricultural land. **South:** Residences and agricultural land. **East:** Agricultural land. **West:** Residences on Second Street and agricultural land.
1950	1:500	A residence and Kottinger Village housing north of Kottinger Drive. Agricultural land and a residence south of Kottinger Drive.	**North:** Residences and agricultural land. **South:** Residences **East:** Kottinger Village housing **West:** Residences
1958	1:500	A residence and Kottinger Village housing north of Kottinger Drive. Agricultural land and a residence south of Kottinger Drive.	**North:** Residences **South:** Residences **East:** Kottinger Village housing and residences **West:** Residences
1965	1:500	A residence and Kottinger Village housing north of Kottinger Drive. Agricultural land and a residence south of Kottinger Drive.	**North:** Residences **South:** Residences **East:** Kottinger Village housing and residences **West:** Residences
1974	1:500	The current improvements are present - Kottinger Place Apartments, Pleasanton Gardens Apartments and Regalia House	**North:** Residences **South:** Residences **East:** Kottinger Village Park and residences **West:** Residences

1982	1:500	No significant differences were observed in comparison to the 1974 aerial photograph.	**North:** No significant differences were observed. **South:** No significant differences were observed. **East:** No significant differences were observed. **West:** No significant differences were observed.
1993	1:500	No significant differences were observed in comparison to the 1982 aerial photograph.	**North:** No significant differences were observed. **South:** No significant differences were observed. **East:** No significant differences were observed. **West:** No significant differences were observed.
1998	1:500	No significant differences were observed in comparison to the 1993 aerial photograph.	**North:** No significant differences were observed. **South:** No significant differences were observed. **East:** No significant differences were observed. **West:** No significant differences were observed.
2006	1:500	No significant differences were observed in comparison to the 1998 aerial photograph.	**North:** No significant differences were observed. **South:** No significant differences were observed. **East:** No significant differences were observed. **West:** No significant differences were observed.

3.3 SANBORN FIRE INSURANCE MAPS

Sanborn Fire Insurance maps were developed in the late 1800s and early 1900s for use as an assessment tool for fire insurance rates in urbanized areas. A search was made of Seattle Public Library web site collection of Sanborn Fire Insurance maps.

Sanborn maps were available and reviewed for the years 1888, 1893, 1898, 1903, 1907, and 1943.

North of Kottinger Drive

Dates	Subject Property Description	Surrounding Area Descriptions
1888,1983, 1898, and 1903	No coverage	**North:** No coverage **South:** No coverage **East:** No coverage **West:** No coverage
1907	Residence and stable	**North:** Residences **South:** A street, residences and a seasonal creek. **East:** One residence **West:** Residences and stables
1943	A shed	**North:** Residences **South:** Residences **East:** No coverage **West:** Residences

South of Kottinger Drive

Dates	Subject Property Description	Surrounding Area Descriptions
1888,1983, 1898, and 1903	No coverage	**North:** No coverage **South:** No coverage **East:** No coverage **West:** No coverage
1907	Two residences and a seasonal creek.	**North:** Residences and a stable **South:** Residences **East:** No coverage **West:** Residences
1943	Residences and a seasonal creek.	**North:** Residences **South:** Residences **East:** No coverage **West:** Residences

AEI obtained an additional 1953 Sanborn Insurance map from EDR. However, the file was damaged and could not be downloaded into the report.

3.4 CITY DIRECTORIES

A search of historic city directories was conducted for the subject property at the Fremont Library web site. Directories were available and reviewed for the years 1973, 1978, 1983, 1988, 1993, 1998, 2003, 2008, and 2013. The following table summarizes the results of the city directory search.

City Directory Search Results

Date(s)	Occupant Listed
1973	Pleasanton Gardens (251 Kottinger Drive) Residence (4138 Vineyard Avenue)
1978, 1983, 1988, 1993, 1998, 2003, and 2008	Kottinger Place Apartments (240 Kottinger Drive) Pleasanton Gardens Apartments (251 Kottinger Drive) Residence (4138 Vineyard Avenue)
2013	Kottinger Place Apartments (240 Kottinger Drive) Pleasanton Gardens Apartments (251 Kottinger Drive)

The Regalia House (4158 Regalia Court) is not listed in any city directory examined.

No environmental concerns were noted during the city directory review.

3.5 HISTORICAL TOPOGRAPHIC MAPS

In accordance with our approved scope of services, historical topographic maps were not reviewed as a part of this assessment.

3.6 CHAIN OF TITLE

In accordance with our approved scope of services, a Chain of Title search was not performed as part of this assessment.

4.0 REGULATORY AGENCY RECORDS REVIEW

4.1 REGULATORY AGENCIES

Local and state agencies, such as environmental health departments, fire prevention bureaus, and building and planning departments are contacted to identify any current or previous reports of hazardous materials use, storage, and/or unauthorized releases that may have impacted the subject property. In addition, information pertaining to Activity and Use Limitations (AULs), defined as legal or physical restrictions, or limitations on the use of, or access to, a site or facility, is requested.

4.1.1 HEALTH DEPARTMENT

On January 2, 2013, AEI contacted the Alameda County Department of Environmental Health (ACDEH) for information on the subject property and nearby sites of concern. Files at this agency may contain information regarding hazardous materials storage, as well as information regarding unauthorized releases of petroleum hydrocarbons or other contaminants that may affect the soil or groundwater in the area. For the City of Pleasanton, the ACDEH only has records for leaking underground storage tanks (LUSTs). Copies of these files and other environmental files are kept at the Livermore-Pleasanton Fire Department.

No information indicating current or prior use or storage of hazardous materials, or the existence of AULs was on file for the subject property with the ACDEH.

4.1.2 FIRE DEPARTMENT

On January 7, 2013, AEI visited the Livermore-Pleasanton Fire Department (LPFD) for information on the subject property to identify any evidence of previous or current hazardous material usage.

No information indicating current or prior use or storage of hazardous materials, or the existence of AULs was on file for the subject property with the LPFD.

4.1.3 BUILDING DEPARTMENT

On January 2, 2013, AEI visited the Pleasanton Building Department (PBD) for information on the subject property in order to identify historical tenants and property use. Please refer to the following table for a listing of permits reviewed:

Building Permits Reviewed

Year	Owner/Applicant	Description of Permit/Building Use
1965	Pleasanton Women's Club – 4153 Regalia Court	Remodel
1970	City of Pleasanton	Proposal for development of subject property as low-income housing and development of a park on the adjoining property.
1972	City of Pleasanton	Original permits for Kottinger Place Senior Apartments (240 Kottinger Drive)
1997	City of Pleasanton	Accessibility remodeling of units (240 Kottinger Drive)
1969	Pleasanton Gardens Inc.	Original permits for Pleasanton Gardens Senior Apartments (251 Kottinger Drive)

Year	Owner/Applicant	Description of Permit/Building Use
1993	Pleasanton Gardens Inc.	Replacement of carpeting
1995	Pleasanton Gardens Inc.	Fence

No information indicating current or prior use or storage of hazardous materials, or the existence of AULs was on file for the subject property with the LBD.

4.1.4 PLANNING DEPARTMENT

On January 2, 2013, AEI visited the Pleasanton Planning Department (PPD) for information on the subject property in order to identify AULs associated with the subject property.

No information indicating the existence of AULs was on file for the subject property with the PPD.

4.1.5 COUNTY ASSESSOR OFFICE

On January 2, 2013, AEI contacted the Alameda County assessor's office for information on the subject property in order to determine the earliest recorded date of development and use.

According to the Alameda County assessor's office, the earliest recorded date of development on subject property was 1972 for 240 Kottinger Drive and 1969 for 251 Kottinger Drive, and the subject property was utilized for senior housing.

4.1.6 DEPARTMENT OF OIL AND GAS

Department of Oil, Gas, and Geothermal Resources (DOGGR) maps concerning the subject property and nearby properties were reviewed. DOGGR maps contain information regarding oil and gas development.

According to the DOGGR map, there are no oil or gas wells within 500 feet of the subject property.

4.1.7 OTHER AGENCIES SEARCHED

On January 2, 2013, AEI visited the City of Pleasanton Housing Authority (PHA) for and received information on square footage and age of the properties.

On January 2, 2013, AEI visited the Museum on Main (Pleasanton Historical Society) for historical information on the subject property. AEI was informed that the 240 Kottinger Drive property and the adjoining park was previously occupied by housing constructed during World War II (1943) and was known as Kottinger Village. The curators stated the residences were demolished when the current improvements were constructed in 1972. A wood plaque for Kottinger Village is on display at the Museum on Main.

5.0 REGULATORY DATABASE RECORDS REVIEW

AEI contracted Environmental Data Resources (EDR) to conduct a search of federal, state, tribal, and local databases containing known and suspected sites of environmental contamination. The number of listed sites identified within the approximate minimum search distance (AMSD) from the Federal and State environmental records database listings specified in ASTM Standard E 1527-05 are summarized in the following table. A copy of the regulatory database report is included in Appendix B of this report.

The subject property was identified in the databases reviewed as a HAZNET site. It is further discussed below in Section 5.1.

In determining if a site is a potential environmental concern to the subject property in the records summary table below, AEI has applied the following criteria to classify the site(s) as low concern: 1) the site(s) only hold an operating permit (which does not imply a release), 2) the site(s) have been granted "No Further Action" by the appropriate regulatory agency, and/or 3) based upon AEI's review, the distance and/or topographic position relative to the subject property reduce the level of risk associated with the site(s).

5.1 RECORDS SUMMARY

Database	Search Distance (Miles)	Subject Property Listed	Total Number of Listings	Potential Environmental Concern to the Subject Property (Yes/No)
NPL	1	No	0	No
DELISTED NPL	0.5	No	0	No
CERCLIS	0.5	No	0	No
CERCLIS NFRAP	0.5	No	0	No
RCRA CORRACTS	1	No	0	No
RCRA-TSD	0.5	No	0	No
RCRA LG-GEN, SM-GEN, CESQGs, VGN, NLR	TP/ADJ	No	0	No
US ENG CONTROLS	TP	No	0	No
US INST CONTROLS	TP	No	0	No
ERNS	TP	No	0	No
STATE/TRIBAL HWS	1	No	0	No
STATE/TRIBAL SWLF	0.5	No	0	No
STATE/TRIBAL REGISTERED STORAGE TANKS	TP/ADJ	No	4	No, all four sites are located downgradient.

Database	Search Distance (Miles)	Subject Property Listed	Total Number of Listings	Potential Environmental Concern to the Subject Property (Yes/No)
STATE/TRIBAL LUST	0.5	No	9	No, all nine sites are located downgradient.
STATE/TRIBAL ENG-INST CONTROLS	TP	No	0	No
STATE/TRIBAL VCP	0.5	No	0	No
STATE/TRIBAL BROWNFIELD	0.5	No	0	No
ORPHAN	N/A	No	5	None of the identified orphan sites are located in the immediate vicinity (500-feet) of the subject property, and therefore, these sites are not expected to represent a significant environmental concern.
NON-ASTM DATABASES	TP/ADJ	**Yes**	1	No, discussed below.

Site Name: City of Pleasanton Database: HAZNET Address: 4138 Vineyard Avenue Distance: Subject Property Direction: N/A
Comments: This property is now a vacant lot that is part of the subject property. It was occupied by a residence built in 1948. It was purchased by the City of Pleasanton in 2011 and demolished in late 2011 or early 2012. This listing is for the removal of 0.8 tons of asbestos containing waste, likely from the demolition of the building. This listing is not expected to represent a significant concern.

6.0 INTERVIEWS AND USER PROVIDED INFORMATION

6.1 INTERVIEWS

Pursuant to ASTM E1527-05, the following interviews were performed during this investigation in order to obtain information indicating RECs in connection with the subject property.

6.1.1 INTERVIEW WITH OWNERS

The Kottinger Place Senior Apartments (240 Kottinger Drive) is owned by the city of Pleasanton Housing Authority and the Pleasanton Gardens Senior apartments are owned by Pleasanton Gardens Inc. As they are organizations, they were not interviewed.

6.1.2 INTERVIEW WITH KEY SITE MANAGERS

The key site manager of the Kottinger Park Senior Apartments, Ms. Heather Macker, was contacted in person on January 2, 2013. Ms. Macker has been associated with the subject property since approximately June 2011. Ms. Macker provided general information regarding historic and current operations at the subject property. She stated that the only hazardous materials on the property were small, normal amounts of household cleaners, paints and stains. Landscaping is done by the City of Pleasanton. She is not aware of any hazardous materials on the surrounding properties. She stated that Mid Penn has sent people to do asbestos and lead-based surveys.

Ms. Macker was asked if she was aware of any of the following:

Any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property.		Yes	**X**	No
Any pending, threatened or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property.		Yes	**X**	No
Any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products.		Yes	**X**	No
Any incidents of flooding, leaks, or other water intrusion, and/or complaints related to indoor air quality.		Yes	**X**	No

The key site manager of the Pleasanton Garden Senior Apartments, Ms. Yvette Ochoa, was contacted in person on January 7, 2013. Ms. Ochoa has been associated with the subject property approximately seven months. Ms. Ochoa provided general information regarding historic and current operations at the subject property. Ms. Ochoa stated that the only hazardous materials on the property were small, normal amounts of household cleaners, paints and stains.

Ms. Ochoa was asked if she was aware of any of the following:

Any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property.		Yes	**X**	No
Any pending, threatened or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property.		Yes	**X**	No
Any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products.		Yes	**X**	No
Any incidents of flooding, leaks, or other water intrusion, and/or complaints related to indoor air quality.		Yes	**X**	No

6.1.3 Past Owners, Operators and Occupants

Interviews with past owners and occupants regarding historical onsite operations were not reasonably ascertainable. However, based on information obtained from other sources including the City of Pleasanton offices, aerial photographs, Sanborn insurance maps, and city directories, it is likely that the information provided by past owners and operators would have been duplicative.

6.1.4 Interview with Others

Information obtained during interviews with local government officials is incorporated into the appropriate segments of this section.

6.2 User Provided Information

User provided information is intended to help identify the possibility of RECs in connection with the subject property. According to ASTM E1527-05 and EPA's AAI Rule, certain items should be researched by the prospective landowner or grantee, and the results of such inquiries may be provided to the environmental professional. The responsibility for qualifying for Landowner Liability Protections (LLPs) by conducting the inquiries ultimately rests with the User, and providing the information to the environmental professional would be prudent if such information is available.

The User did not complete the ASTM User questionnaire or provide the User information to AEI. AEI assumes that qualification for the LLPs is being established by the User in documentation outside of this assessment.

6.3 Previous Reports and Other Provided Documentation

No prior reports or relevant documentation in association with the subject property were made available to AEI during the course of this assessment.

7.0 SITE INSPECTION AND RECONNAISSANCE

On January 2 and January 7, 2013, a site reconnaissance of the subject property and adjacent properties was conducted by Kevin Nawotka of AEI in order to obtain information indicating the likelihood of RECs at the subject property and adjacent properties as specified in ASTM Standard Practice E1527-05 §8.4.2, 8.4.3 and 8.4.4. During the onsite reconnaissance, AEI was Ms. Heather Macker, Property Manager of the Kottinger Place Apartments (240 Kottinger Drive), Mr. Jose Uicab, the Maintenance Supervisor for the Pleasanton Gardens Apartments (251 Kottinger Drive) and Mr. Thom Fullon, a worker for the City of Pleasanton Services Since there were 90 units in the two apartment complexes, AEI visited units 6, 11, 20, 34, and 48 at the Kottinger Place Apartments, and units 1, 20, 33, and 39 at the Pleasanton Gardens Apartments (10% of the total units).

7.1 SUBJECT PROPERTY RECONNAISSANCE FINDINGS

Yes	No	Observation
X		Hazardous Substances and/or Petroleum Products in Connection with Property Use
	X	Aboveground & Underground Hazardous Substance or Petroleum Product Storage Tanks (ASTs / USTs)
	X	Hazardous Substance and Petroleum Product Containers and Unidentified Containers not in Connection with Property Use
	X	Unidentified Substance Containers
X		Electrical or Mechanical Equipment Likely to Contain Fluids
	X	Interior Stains or Corrosion
	X	Strong, Pungent or Noxious Odors
	X	Pools of Liquid
	X	Drains, Sumps and Clarifiers
	X	Pits, Ponds and Lagoons
	X	Stained Soil or Pavement
	X	Stressed Vegetation
	X	Solid Waste Disposal or Evidence of Fill Materials
	X	Waste Water Discharges
	X	Wells
	X	Septic Systems
	X	Other

The subject property is currently occupied by the Kottinger Place and Pleasanton Gardens senior apartments and Regalia house, a building that is used for city activities and rented out for various functions.

The above-identified observed items are further discussed below.

HAZARDOUS SUBSTANCES AND/OR PETROLEUM PRODUCTS IN CONNECTION WITH PROPERTY USE

Small amounts of household cleaning supplies, paints and maintenance chemicals (gasoline for lawn equipment) are present on the 240 and 251 Kottinger Drive properties. All materials are

stored in compliance with local and state regulations. No spills, staining or releases were observed on the subject properties.

ELECTRICAL OR MECHANICAL EQUIPMENT LIKELY TO CONTAIN FLUIDS

Toxic polychlorinated biphenyls (PCBs) were commonly used historically in electrical equipment such as transformers, fluorescent lamp ballasts, and capacitors. According to United States EPA regulation 40 CFR, Part 761, there are three categories for classifying such equipment: <50 ppm of PCBs is considered "Non-PCB"; between 50 and 500 ppm is considered "PCB-Contaminated"; and >500 ppm is considered "PCB-Containing". Pursuant to 15 U.S.C. 2605(e)(2)(A), the manufacture, process, or distribution in commerce or use of any polychlorinated biphenyl in any manner other than in a totally enclosed manner was prohibited after January 1, 1977.

Transformers

The management of potential PCB-containing transformers is the responsibility of the local utility or the transformer owner. Actual material samples need to be collected to determine if transformers are PCB-containing.

Pad-mounted transformers were observed on the subject property during the site inspection. The transformers are owned and operated by PG&E, and based on the presumed date of installation, are not expected to be PCB containing. Federal Regulations (40 CFR 761. Subpart G) require any release of material containing greater than 50 ppm PCB and occurring after May 4, 1987, be cleaned up by the Owner (PG&E) following the United States Environmental Protection Agency's (USEPA) PCB spill cleanup policy. No spills, staining or leaks were observed on or around the transformers. Based on the good condition of the equipment, the transformers are not expected to represent a significant environmental concern.

7.2 NON-ASTM SERVICES

7.2.1 ASBESTOS-CONTAINING BUILDING MATERIALS

OSHA

For buildings constructed prior to 1981, the Code of Federal Regulations (29 CFR 1926.1101 and 29 CFR 1910.1001) define presumed asbestos-containing material (PACM) as 1. Thermal System Insulation (TSI), e.g., boiler insulation, pipe lagging, fireproofing; and 2. Surfacing Materials, e.g., acoustical ceilings. Building owners/employers are responsible for locating the presence and quantity of PACM. Building owners/employers can rebut installed material as PACM by either having an inspection in accordance with Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763, Subpart E) or hiring an accredited inspector to take bulk samples of the suspect material.

Typical materials not covered by the presumptive rule include but are not limited to: floor tiles and adhesives, wallboard systems, siding and roofing. Building materials such as wallboard systems may contain asbestos but unless a building owner/employer has specific knowledge or should have known through the exercise of due diligence that these other materials contain asbestos, the standard does not compel the building owner to sample these materials.

NESHAP

The applicability of the EPA's National Emission Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Chapter 61, Subpart M) apply to the owner or operator of a facility where an inspection for the presence of asbestos-containing materials (ACM), including Category I (asbestos containing packings, gaskets, resilient floor coverings and asphalt roofing products), and Category II (all remaining types of non-friable asbestos containing material not included in Category I that when dry, cannot be crumbled, pulverized or reduced to powder by hand pressure), non-friable ACM must occur prior to the commencement of demolition or renovation activities. NESHAP defines ACM as any material or product that contains *greater than* 1% asbestos. It should be noted that the NESHAP regulation applies to all facilities regardless of construction date, including: 1. Any institutional, commercial, public, industrial, or residential structure, installation, or building; 2. Any ship; and 3. Any active or inactive waste disposal site. This requirement is typically enforced by the EPA or by local air pollution control/air quality management districts.

The information below is for general informational purposes only and does not constitute an asbestos survey. In addition, the information is not intended to comply with federal, state or local regulations in regards to ACM.

Due to the age of the subject property buildings, there is a potential that ACMs are present. The condition and friability of the identified suspect ACMs is noted on the following table:

Suspect Asbestos Containing Materials (ACMs)

Material	Location	Friable	Condition
Drywall Systems	Throughout Building Interiors	No	Good
1' x 1' ceiling tiles	Regalia House (4153 Regalia Court	Yes	Good
Vinyl sheet flooring	Kitchen area and bathrooms in all tenant units and clubhouses. Interior of Regalia House	No	Good
Roofing Systems	Roof	Not Inspected	Not Inspected

All observed suspect ACMs were in good condition and are not expected to pose a health and safety concern to the occupants of the subject property at this time. In the event that building renovation or demolition activities are planned, an asbestos survey adhering to AHERA sampling protocol should be performed prior to demolition or renovation activities that may disturb suspect ACMs.

7.2.2 LEAD-BASED PAINT

Lead-based paint (LBP) is defined as any paint, varnish, stain, or other applied coating that has ≥1 mg/cm^2 (5,000 µg/g or 5,000 ppm) or more of lead by federal guidelines; state and local definitions may differ from the federal definitions in amounts ranging from 0.5 mg/cm^2 to 2.0 mg/cm^2. Section 1017 of the Housing and Urban Development (HUD) Guidelines, Residential Lead-Based Paint Hazard Reduction Act of 1992, otherwise known as "Title X", defines a LBP hazard is "any condition that causes exposure to lead that would result in adverse human health effects" resulting from lead-contaminated dust, bare, lead-contaminated soil, and/or lead-contaminated paint that is deteriorated or present on accessible, friction, or impact surfaces. Therefore, under Title X, intact lead-based paint on most walls and ceilings would not be considered a "hazard", although the paint should be maintained and its condition and monitored to ensure that it does not deteriorate and become a hazard. Additionally, Section

1018 of this law directed HUD and EPA to require the disclosure of known information on lead-based paint and lead-based paint hazards before the sale or lease of most housing built before 1978. Most private housing, public housing, federally owned or subsidized housing are affected by this rule.

Lead-containing paint (LCP) is defined as any paint with any detectable amount of lead present in it. It is important to note that LCP may create a lead hazard when being removed. The condition of these materials must be monitored when they are being disturbed. In the event LCP is subject to abrading, sanding, torching and/or cutting during demolition or renovation activities, there may be regulatory issues that must be addressed.

The information below is for general informational purposes only and does not constitute a lead hazard evaluation. In addition, the information is not intended to comply with federal, state or local regulations in regards to lead-containing paints.

In buildings constructed after 1978, it is unlikely that LBP is present. Structures built prior to 1978 and especially prior to the 1960's should be expected to contain LBP.

Due to the age of the subject property buildings, there is a potential that LBP is present. All observed painted surfaces were in good condition and are not expected to pose a health and safety concern to the occupants of the subject property at this time. Local regulations may apply to lead-based paint in association with building demolition/renovations and worker/occupant protection. Actual material samples would need to be collected or an XRF survey performed in order to determine if LBP is present. It should be noted that construction activities that disturb materials or paints containing *any amount* of lead may be subject to certain requirements of the OSHA lead standard contained in 29 CFR 1910.1025 and 1926.62.

7.2.3 RADON

Radon is a naturally-occurring, odorless, invisible gas. Natural radon levels vary and are closely related to geologic formations. Radon may enter buildings through basement sumps or other openings.

The US EPA has prepared a map to assist National, State, and local organizations to target their resources and to implement radon-resistant building codes. The map divides the country into three Radon Zones, Zone 1 being those areas with the average predicted indoor radon concentration in residential dwellings exceeding the EPA Action limit of 4.0 picoCuries per Liter (pCi/L). It is important to note that the EPA has found homes with elevated levels of radon in all three zones, and the EPA recommends site specific testing in order to determine radon levels at a specific location. However, the map does give a valuable indication of the propensity of radon gas accumulation in structures.

Radon sampling was not requested as part of this assessment. According to the US EPA, the radon zone level for the area is Zone 2, which has a predicted average indoor screening level between 2.0 pCi/L and 4.0 pCi/L, equal to or below the action level of 4.0 pCi/L set forth by the EPA.

7.2.4 Drinking Water Sources and Lead in Drinking Water

The City of Pleasanton supplies potable water to the subject property. The most recent water quality report states that lead levels in the areas water supply were 5.6 μg/L and therefore are well within standards established by the USEPA, state and local agencies.

7.2.5 Mold / Indoor Air Quality Issues

Molds are simple, microscopic organisms, which can often be seen in the form of discoloration, frequently green, gray, white, brown or black. When excessive moisture or water accumulates indoors, mold growth will often occur, particularly if the moisture problem remains undiscovered or is not addressed. As such, interior areas of buildings characterized by poor ventilation and high humidity are the most common locations of mold growth. Building materials including drywall, wallpaper, baseboards, wood framing, insulation, and carpeting often play host to such growth. Mold spores primarily cause health problems through the inhalation of mold spores or the toxins they emit when they are present in large numbers. This can occur primarily when there is active mold growth within places where people live or work.

Mold, if present, may or may not visually manifest itself. Neither the individual completing this inspection, nor AEI has any liability for the identification of mold-related concerns except as defined in applicable industry standards. In short, this Phase I ESA should not be construed as a mold survey or inspection.

AEI Consultants observed interior areas of the subject buildings in order to identify the significant presence of mold. AEI did not note obvious visual or olfactory indications of the presence of mold, nor did AEI observe obvious indications of significant water damage. As such, no bulk sampling of suspect surfaces was conducted as part of this assessment and no additional action with respect to mold appears to be warranted at this time.

This activity was not designed to discover all areas that may be affected by mold growth on the subject property. Rather, it is intended to give the client an indication if significant (based on observed areas) mold growth is present at the subject property. Additional areas of mold not observed as part of this limited assessment, possibly in pipe chases, HVAC systems and behind enclosed walls and ceilings, may be present on the subject property.

7.3 ADJACENT PROPERTY RECONNAISSANCE FINDINGS

Yes	No	Observation
	X	Hazardous Substances and/or Petroleum Products in Connection with Property Use
	X	Aboveground & Underground Hazardous Substance or Petroleum Product Storage Tanks (ASTs / USTs)
	X	Hazardous Substance and Petroleum Product Containers and Unidentified Containers not in Connection with Property Use
	X	Unidentified Substance Containers
	X	Electrical or Mechanical Equipment Likely to Contain Fluids
	X	Strong, Pungent or Noxious Odors
	X	Pools of Liquid
	X	Drains, Sumps and Clarifiers
	X	Pits, Ponds and Lagoons
	X	Stained Soil or Pavement
	X	Stressed Vegetation
	X	Solid Waste Disposal or Evidence of Fill Materials
	X	Waste Water Discharges
	X	Wells
	X	Septic Systems
	X	Other

None of the above listed items were observed during the site inspection.

8.0 SIGNATURE OF ENVIRONMENTAL PROFESSIONALS

By signing this report, the senior author declares that, to the best of his or her professional knowledge and belief, he or she meets the definition of *Environmental Professional* as defined in §312.10 of 40 CFR Part 312.

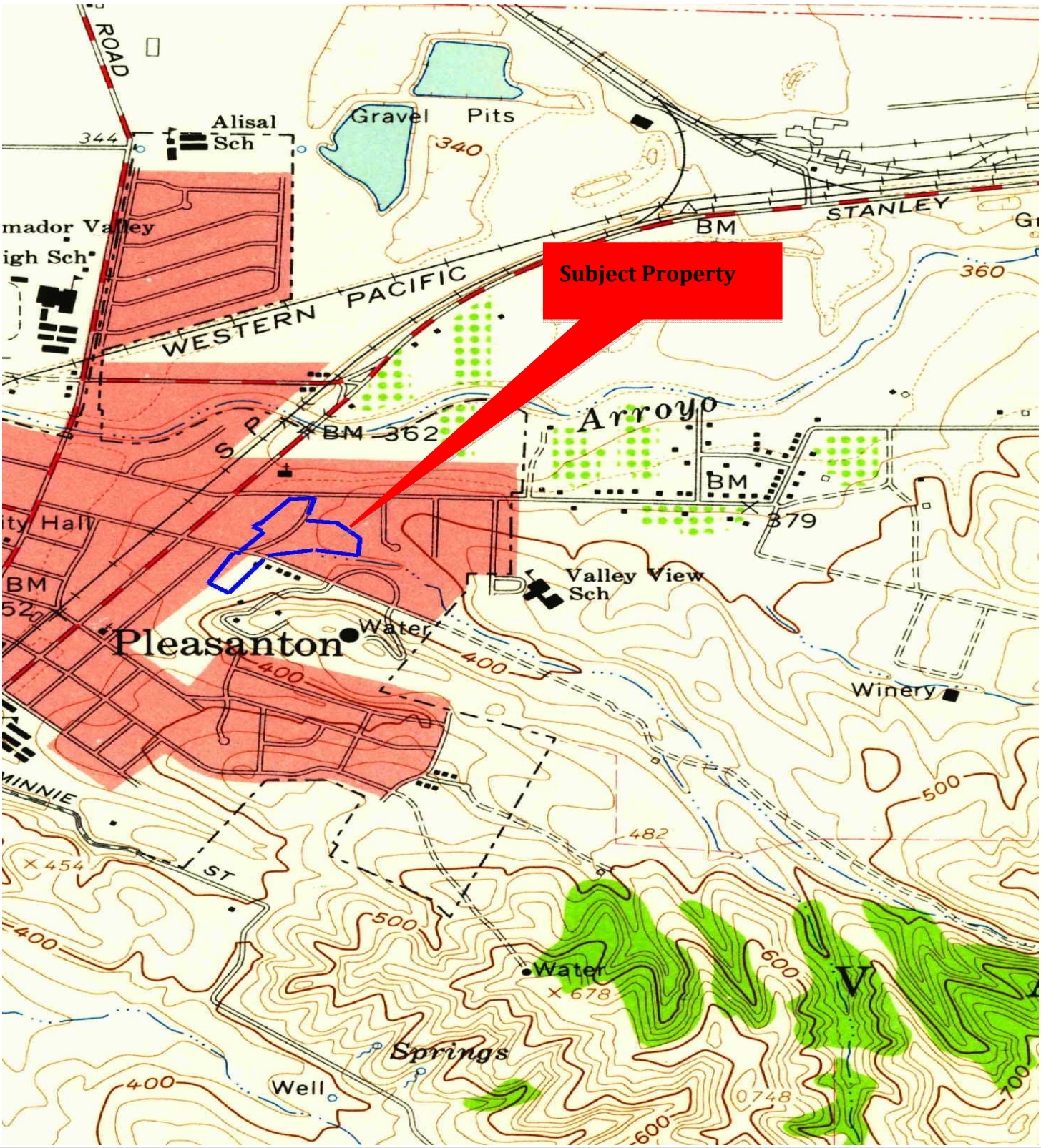
The senior author has the specific qualifications based on education, training, and experience to assess a property of the nature, history and setting of the subject property. The senior author has developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40CFR Part 312.

Prepared By:	Reviewed By:
Kevin Nawotka	Steve Kovach
Associate Consultant	Senior Author

9.0 REFERENCES

Item	Date(s)	Source
Topographic Map	1961	United States Geological Service, Livermore Quadrangle
Regulatory Database	December 21, 2012	The EDR Radius Map Report
Aerial Photographs	1939, 1950, 1958, 1965, 1974, 1982, 1993, 1998. 2005, and 2006	The EDR Aerial Photo Decade Package.
Health Department	December 31, 2012	Alameda County Department of Environmental Health
Building Department	January 2, 2013	Pleasanton Building Department
Fire Department	January 7, 2013	Livermore-Pleasanton Fire Department
City Directories	1977, 1978, 1983, 1988, 1993, 1998, 2003, 2008, and 2013	Fremont Main Library Haines Criss-Cross Directories
Geology	January 2, 2013	California Department of Conservation web site (http://www.quake.ca.gov/gmaps/GMC/stategeologicmap.html)
Sanborn Fire Insurance Maps	January 2, 2013	Seattle Public Library Sanborn Map collection
Planning Department	January 2, 2013	Pleasanton Planning Department
Radon	1983	US EPA California Map of Radon Zones (http://www.epa.gov/radon/zonemap.html)
Soil information	January 2, 2013	California Soil Resource Lab (http://casoilresource.lawr.ucdavis.edu/soilweb_gmap/)
Historical information	January 2, 2013	Pleasanton Housing Authority
Historical information	January 2, 2013	Museum on Main (Pleasanton Historical Society)

FIGURES



SITE LOCATION MAP

240 & 251 Kottinger Drive, 4138 Vineyard Avenue & 4153 Regalia Court,
Pleasanton, California, 94566

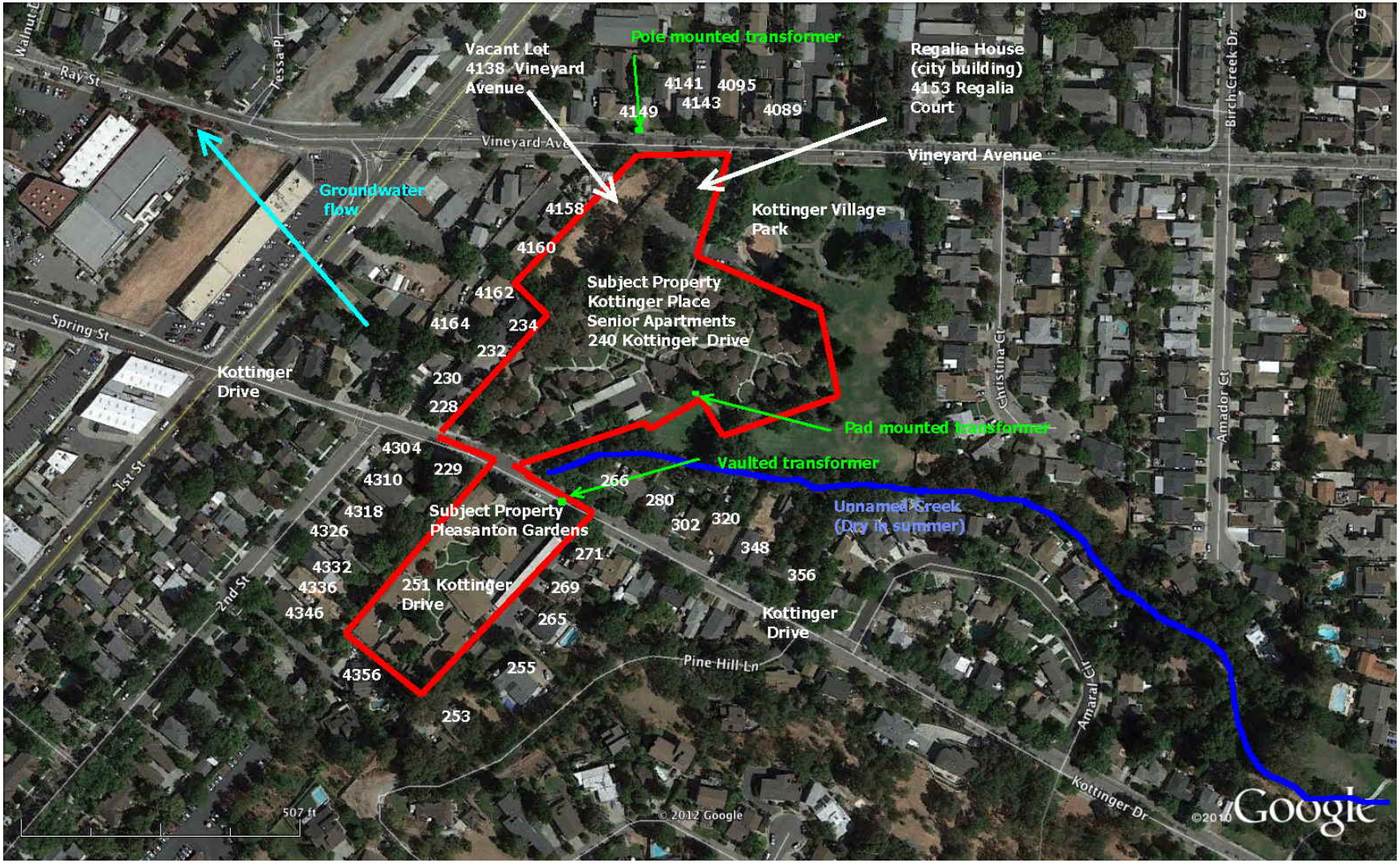
N

FIGURE 1

Project: 315504

Source: USGS Livermore Quadrangle, 1971

AEI Consultants



SITE MAP

240 & 251 Kottinger Drive 4138 Vineyard Avenue & 4153 Regalia Court, Pleasanton, California, 94566

N

Legend

Approximate Property Boundary

FIGURE 2

Project Number: 315504

AEI Consultants

APPENDIX A

PROPERTY PHOTOGRAPHS

1. City of Pleasanton owned Regalia House (4153 Regalia Court). East (Front) elevation.

2. North (right) elevation of Regalia House.

3. West (rear) elevation of Regalia House.

4. South (left) elevation of Regalia House.

5. Main room of Regalia House.

6. Ceiling of main room.

7. Restroom in Regalia House.

8. Food preparation area of Regalia House.

9. Storeroom in Regalia House.

10. Another storeroom in Regalia House.

11. Refuse dumpster outside of Regalia House.

12. Part of subject property- east side of vacant lot (4138 Vineyard Avenue).

13. Part of subject property- west side of vacant lot (4138 Vineyard Avenue).

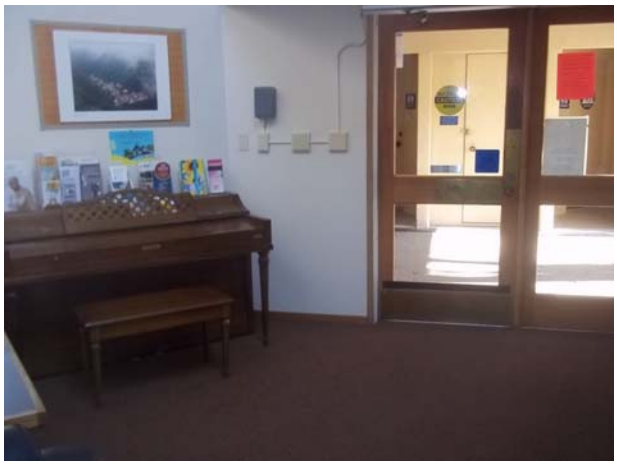
14. Part of subject property- rear of vacant lot (4138 Vineyard Avenue).

15. Sign for Kottinger Place Senior Apartments (240 Kottinger Drive).

16. North (front) elevation of clubhouse/office of 240 Kottinger Drive.

17. East (left) elevation of clubhouse/office of 240 Kottinger Drive.

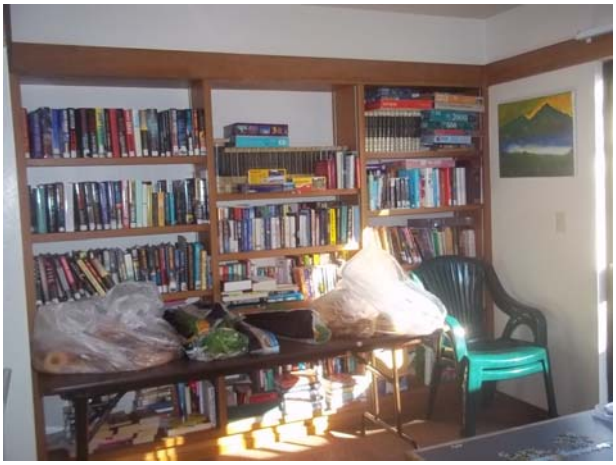
18. Outdoor patio area of clubhouse/office of 240 Kottinger Drive.



19. Entry area of clubhouse - 240 Kottinger Drive.

20. Main area of clubhouse.

21. Natural gas fireplace in clubhouse.



22. Library area in clubhouse

23. Kitchen area in clubhouse.

24. Second floor area in clubhouse - turned into a storage area.

25. Laundry room

26. Sink in laundry room.

27. Restroom in clubhouse.

28. Maintenance office

29. Paint storage in maintenance office

30. Maintenance chemical storage in maintenance office

31. Water heater for clubhouse.

32. Flammables cabinet.

33. Flammables cabinet.

34. Household cleaners storage.

35. Household cleaners storage.

36. Furnace for laundry room and maintenance room.

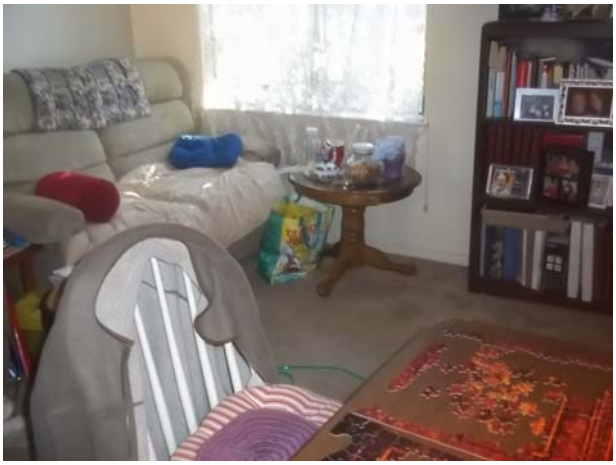
37. Furnace for office area.

38. Outdoor trash storage

39. Outdoor paint storage

40. PG&E pad-mounted transformer.

41. Another view of transformer.



42. Typical living room area in tenant unit.

43. Typical kitchen are.

44. Typical ADA accessible bathroom.

45. Typical bedroom.

46. Typical natural gas wall powered wall furnace.

47. Typical electric in-wall air conditioner.

48. Typical water heater – one per building.

49. Tenant garden area.

50. Map of Kottinger place. Blue is residential units and orange is clubhouse.

51. Plaque at the local Historical Society from previous tenant of the property.

52. Looking north down the middle of the property.

53. Typical front elevation of residential building.

54. Typical side elevation of residential building.

55. Typical rear elevation of residential building.

56. Typical rear elevation of residential building.

57. Typical drain on landscaped area.

58. Adjoining property to the north - 4149 Vineyard Avenue.

59. Adjoining property to the north - 4141 Vineyard Avenue.

60. Adjoining property to the north - 4143 Vineyard Avenue.

61. Pole mounted transformer across Vineyard Avenue.

62. Adjoining property to the north - 4095 Vineyard Avenue.

63. Adjoining property to the north – 4083 Vineyard Avenue.

64. Adjoining property to the east – Kottinger Village Park.

65. Adjoining property to the east – Kottinger Village Park.

66. Adjoining property to the southeast – Kottinger Village Park.

67. Adjoining property to the southeast – Kottinger Village Park.

68. Adjoining property to the south – Kottinger Village Park.

69. Seasonal creek south of 240 Kottinger Drive.

70. Adjoining property to the south past creek – 266 Kottinger Drive.

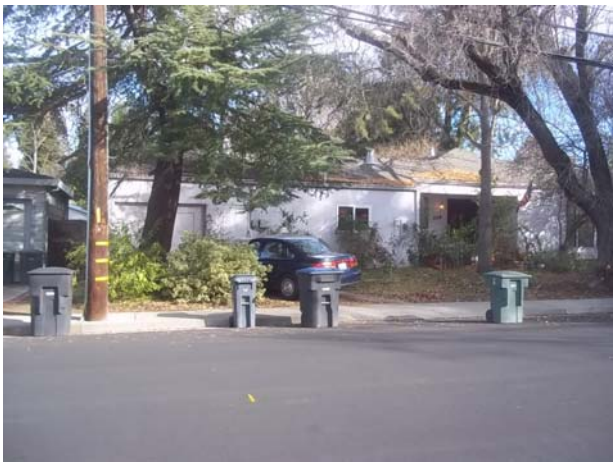
71. Adjoining property to the south past creek – 286 Kottinger Drive.

72. Adjoining property to the south past creek – 302 Kottinger Drive.

73. Adjoining property to the south past creek – 324 Kottinger Drive.

74. Adjoining property to the south past creek – 348 Kottinger Drive.

75. Adjoining property to the south past creek – 356 Kottinger Drive.



76. Adjoining property to the south past creek – 372 Kottinger Drive.

77. Adjoining property across Kottinger Drive – other part of subject property- Pleasanton Gardens (251 Kottinger Drive).

78. Adjoining property across Kottinger Drive – 229 Kottinger Drive.

79. Adjoining property across Kottinger Drive – 4304 Second Street.

80. Adjoining property to the west - Condominiums (228, 230, 232, and 234 Kottinger Drive).

81. Adjoining property to the west - 4158, 4160, 4162, & 4164 Vineyard Avenue.

82. Adjoining property to the west – 4156 Vineyard Avenue.

83. Sign for Pleasanton Gardens Senior Apartments (251Kottinger Drive).

84. North (front) elevation of clubhouse at 251 Kottinger Drive.

85. East (left) elevation of clubhouse at 251 Kottinger Drive.

86. South (rear) elevation of clubhouse at 251 Kottinger Drive.

87. West (right) elevation of clubhouse at 251 Kottinger Drive.

88. Office area in clubhouse.

89. Main room of clubhouse.

90. Kitchen area in clubhouse.

91. Restroom in clubhouse.

92. Laundry room in clubhouse.

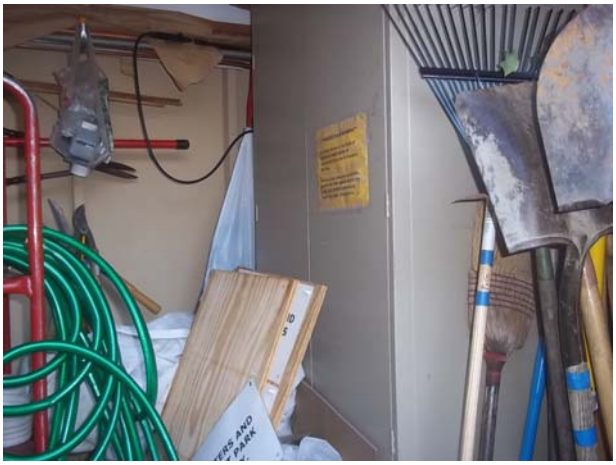
93. Maintenance room.

94. Maintenance room.

95. Maintenance storage shed.

96. Inside Maintenance storage shed.

97. Inside Maintenance storage shed.



98. Inside Maintenance storage shed. Cabinet contains gasoline for landscaping machinery.

99. Recycling bins.

100. Refuse dumpsters.

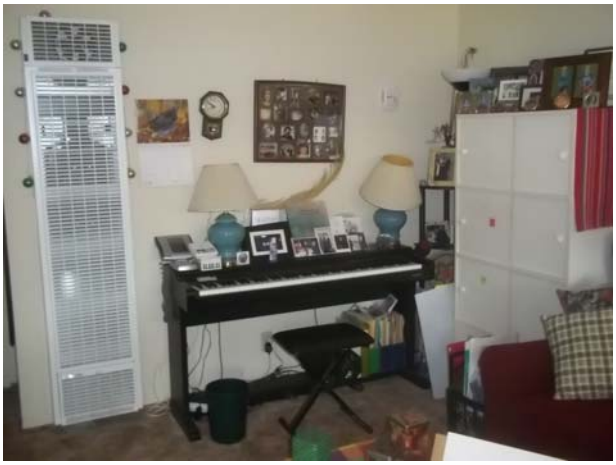
101. Tenant garden.

102. Water tank for garden.

103. Tenant garden.

104. Contents of shed in previous photograph.

105. PG&E pad-mounted transformer.



106. Typical living room.

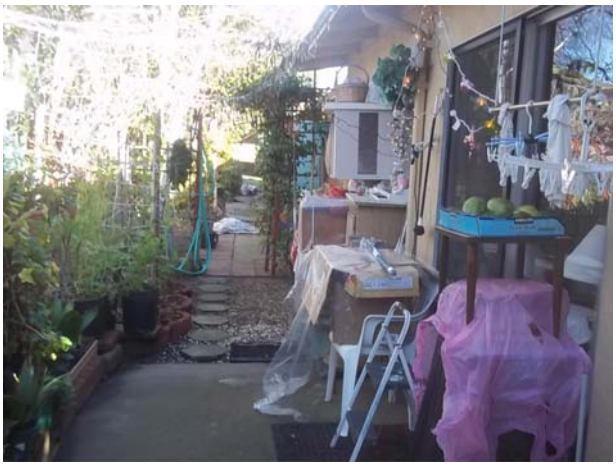
107. Typical bedroom.

108. Typical kitchen.

109. Typical bathroom.

110. Typical front elevation of a residential building.

111. Typical left elevation of a residential building.



112. Typical rear elevation of a residential building.

113. Typical right elevation of a residential building. Typical in-window air conditioner.

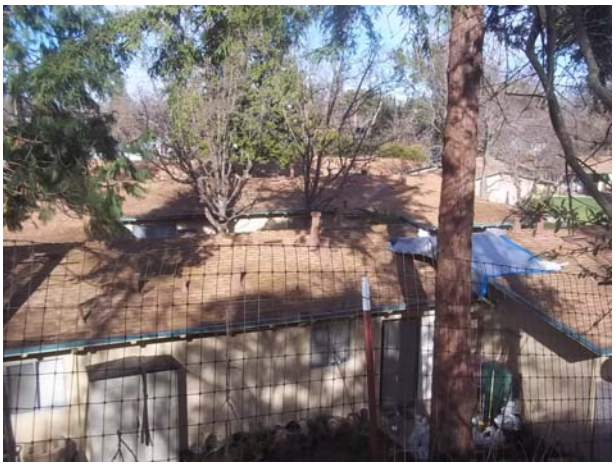
114. Typical water heater. One per building.

115. Central courtyard area of the property.

116. Typical drain on paved area.

117. Tenant carport area.

118. PG&E vaulted transformer.



119. View of the property from the southwest.

120. Adjoining property to the east – 271 Kottinger Drive.

121. Adjoining property to the east – 269 Kottinger Drive.

122. Adjoining property to the east – 265 Kottinger Drive.

123. Adjoining property to the east – 255 Kottinger Drive.

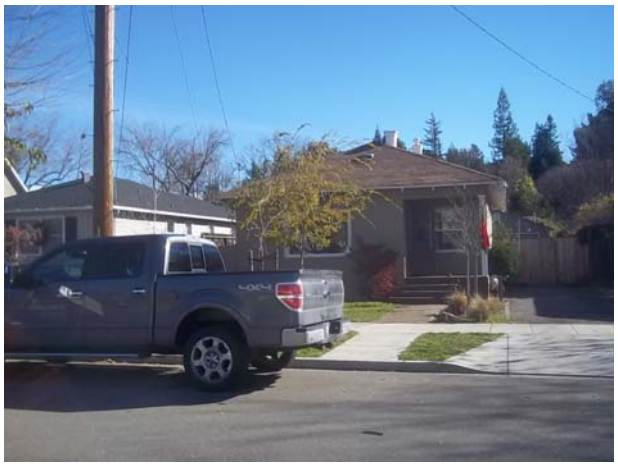
124. Adjoining property to the east – 253 Kottinger Drive.

125. Adjoining property to the west – 4310 Second Street.

126. Adjoining property to the west – 4318 Second Street.

127. Adjoining property to the west – 4326 Second Street.

128. Adjoining property to the west – 4332 Second Street.



129. Adjoining property to the west – 4346 Second Street.

130. Adjoining property to the west – 4348 Second Street.

131. Adjoining property to the south – 4356 Second Street.

APPENDIX B

REGULATORY DATABASE

315504
240 & 251 Kottinger, 4138 Vineyard, 4133 Regalia
Pleasanton, CA 94566

Inquiry Number: 3481821.2s
December 21, 2012

The EDR Radius Map™ Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

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Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	8
Orphan Summary	58
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

GeoCheck - Not Requested

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

240 & 251 KOTTINGER, 4138 VINEYARD, 4133 REGALIA
PLEASANTON, CA 94566

COORDINATES

Latitude (North):	37.6619000 - 37˚ 39' 42.84''
Longitude (West):	121.8687000 - 121˚ 52' 7.32''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	599783.5
UTM Y (Meters):	4168700.2
Elevation:	378 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	37121-F7 LIVERMORE, CA
Most Recent Revision:	1980
West Map:	37121-F8 DUBLIN, CA
Most Recent Revision:	1980

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	2009, 2010
Source:	USDA

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
CITY OF PLEASANTON 4138 VINEYARD AVE PLEASANTON, CA 94566	HAZNET	N/A

EXECUTIVE SUMMARY

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 search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ..... National Priority List
Proposed NPL ..... Proposed National Priority List Sites
NPL LIENS ..... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ..... National Priority List Deletions

Federal CERCLIS list

CERCLIS ..... Comprehensive Environmental Response, Compensation, and Liability Information System
FEDERAL FACILITY ..... Federal Facility Site Information listing

Federal CERCLIS NFRAP site List

CERC-NFRAP ..... CERCLIS No Further Remedial Action Planned

Federal RCRA CORRACTS facilities list

CORRACTS ..... Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ..... RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-CESQG ..... RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

US ENG CONTROLS ..... Engineering Controls Sites List
US INST CONTROL ..... Sites with Institutional Controls
LUCIS ..... Land Use Control Information System

Federal ERNS list

ERNS ..... Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE ..... State Response Sites

State- and tribal - equivalent CERCLIS

ENVIROSTOR ..... EnviroStor Database

EXECUTIVE SUMMARY

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ..... Solid Waste Information System
WDS ..... Waste Discharge System

State and tribal leaking storage tank lists

SLIC ..... Statewide SLIC Cases
INDIAN LUST ..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

AST ..... Aboveground Petroleum Storage Tank Facilities
INDIAN UST ..... Underground Storage Tanks on Indian Land
FEMA UST ..... Underground Storage Tank Listing

State and tribal voluntary cleanup sites

VCP ..... Voluntary Cleanup Program Properties
INDIAN VCP ..... Voluntary Cleanup Priority Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

ODI ..... Open Dump Inventory
DEBRIS REGION 9 ..... Torres Martinez Reservation Illegal Dump Site Locations
WMUDS/SWAT ..... Waste Management Unit Database
SWRCY ..... Recycler Database
HAULERS ..... Registered Waste Tire Haulers Listing
INDIAN ODI ..... Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL ..... Clandestine Drug Labs
HIST Cal-Sites ..... Historical Calsites Database
SCH ..... School Property Evaluation Program
Toxic Pits ..... Toxic Pits Cleanup Act Sites
CDL ..... Clandestine Drug Labs
US HIST CDL ..... National Clandestine Laboratory Register

Local Land Records

LIENS 2 ..... CERCLA Lien Information
LIENS ..... Environmental Liens Listing
DEED ..... Deed Restriction Listing

Records of Emergency Release Reports

HMIRS ..... Hazardous Materials Information Reporting System

CHMIRS	California Hazardous Material Incident Report System
LDS	Land Disposal Sites Listing
MCS	Military Cleanup Sites Listing

Other Ascertainable Records

RCRA-NonGen	RCRA - Non Generators
DOT OPS	Incident and Accident Data
DOD	Department of Defense Sites
FUDS	Formerly Used Defense Sites
CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
MINES	Mines Master Index File
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
RADINFO	Radiation Information Database
FINDS	Facility Index System/Facility Registry System
RAATS	RCRA Administrative Action Tracking System
CA BOND EXP. PLAN	Bond Expenditure Plan
UIC	UIC Listing
NPDES	NPDES Permits Listing
Cortese	"Cortese" Hazardous Waste & Substances Sites List
CUPA Listings	CUPA Resources List
Notify 65	Proposition 65 Records
DRYCLEANERS	Cleaner Facilities
WIP	Well Investigation Program Case List
ENF	Enforcement Action Listing
EMI	Emissions Inventory Data
INDIAN RESERV	Indian Reservations
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
HWT	Registered Hazardous Waste Transporter Database
HWP	EnviroStor Permitted Facilities Listing
FINANCIAL ASSURANCE	Financial Assurance Information Listing
2020 COR ACTION	2020 Corrective Action Program List
PRP	Potentially Responsible Parties
EPA WATCH LIST	EPA WATCH LIST
US FIN ASSUR	Financial Assurance Information
PCB TRANSFORMER	PCB Transformer Registration Database
PROC	Certified Processors Database
MWMP	Medical Waste Management Program Listing
COAL ASH DOE	Steam-Electric Plant Operation Data

EDR PROPRIETARY RECORDS

EDR Proprietary Records

EDR MGP	EDR Proprietary Manufactured Gas Plants

EXECUTIVE SUMMARY

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

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.

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA generators list

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database 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). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 09/11/2012 has revealed that there is 1 RCRA-LQG site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
SERVICE STATION - 135782	4226 FIRST STREET	NW 0 - 1/8 (0.104 mi.)	A5	15

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database 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). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 09/11/2012 has revealed that there are 4 RCRA-SQG sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
PACIFIC BELL	***120 RAY STREET***	***WNW 1/8 - 1/4 (0.170 mi.)***	***D19***	***31***
DECOITES AUTO BODY EMPORIUM	***4019 1ST ST #5***	***N 1/8 - 1/4 (0.193 mi.)***	***E21***	***36***
DAVIDSONS AUTO BODY REPAIR	***4019 1ST ST #11***	***N 1/8 - 1/4 (0.193 mi.)***	***E22***	***37***
FRANKLIN'S AUTO BODY	***4030 1ST ST***	***N 1/8 - 1/4 (0.205 mi.)***	***E24***	***39***

EXECUTIVE SUMMARY

State and tribal leaking storage tank lists

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 10/17/2012 has revealed that there are 10 LUST sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
GARY PINNELLA	***4226 1ST ST***	***NW 0 - 1/8 (0.104 mi.)***	***A3***	***8***
Status: Open - Assessment & Interim Remedial Action				
GAS-N-SAVE	***4191 1ST ST***	***NW 0 - 1/8 (0.110 mi.)***	***B7***	***18***
Status: Open - Remediation				
INTERSTATE NUCLEAR SERVICES	***65 RAY***	***NW 1/8 - 1/4 (0.132 mi.)***	***14***	***27***
Status: Completed - Case Closed				
EL DORADO MOTEL	***3927 1ST***	***NNE 1/4 - 1/2 (0.252 mi.)***	***25***	***40***
Status: Completed - Case Closed				
CITY OF PLEASANTON FIRE STATIO	***4444 RAILROAD AVE***	***WSW 1/4 - 1/2 (0.310 mi.)***	***26***	***42***
Status: Completed - Case Closed				
CHEVRON	***780 MAIN ST***	***WNW 1/4 - 1/2 (0.335 mi.)***	***F27***	***43***
CHEVRON #9-3934	***780 MAIN***	***WNW 1/4 - 1/2 (0.335 mi.)***	***F28***	***45***
Status: Completed - Case Closed				
UNOCAL SERVICE STATION #543	***992 MAIN ST***	***NW 1/4 - 1/2 (0.390 mi.)***	***29***	***46***
Status: Completed - Case Closed				
MOBIL SERVICE STATION	***1024 MAIN ST***	***NW 1/4 - 1/2 (0.408 mi.)***	***30***	***49***
Status: Completed - Case Closed				
EXXON R/S #A-7003	***349 MAIN ST***	***WSW 1/4 - 1/2 (0.483 mi.)***	***31***	***54***
Status: Completed - Case Closed				

Alameda County CS: A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

A review of the Alameda County CS list, as provided by EDR, and dated 10/09/2012 has revealed that there are 9 Alameda County CS sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
GARY PINNELLA	***4226 1ST ST***	***NW 0 - 1/8 (0.104 mi.)***	***A3***	***8***
GAS-N-SAVE	***4191 1ST ST***	***NW 0 - 1/8 (0.110 mi.)***	***B7***	***18***
INTERSTATE NUCLEAR SERVICES	***65 RAY***	***NW 1/8 - 1/4 (0.132 mi.)***	***14***	***27***
EL DORADO MOTEL	***3927 1ST***	***NNE 1/4 - 1/2 (0.252 mi.)***	***25***	***40***
CITY OF PLEASANTON FIRE STATIO	***4444 RAILROAD AVE***	***WSW 1/4 - 1/2 (0.310 mi.)***	***26***	***42***
CHEVRON #9-3934	***780 MAIN***	***WNW 1/4 - 1/2 (0.335 mi.)***	***F28***	***45***
UNOCAL SERVICE STATION #543	***992 MAIN ST***	***NW 1/4 - 1/2 (0.390 mi.)***	***29***	***46***
MOBIL SERVICE STATION	***1024 MAIN ST***	***NW 1/4 - 1/2 (0.408 mi.)***	***30***	***49***
EXXON R/S #A-7003	***349 MAIN ST***	***WSW 1/4 - 1/2 (0.483 mi.)***	***31***	***54***

EXECUTIVE SUMMARY

State and tribal registered storage tank lists

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 10/17/2012 has revealed that there are 2 UST sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
TOSCO CORPORATION, SITE NO.737	4191 FIRST ST.	NW 0 - 1/8 (0.110 mi.)	B8	24
SBC-CENTRAL OFFICE PE069	120 RAY STREET	WNW 1/8 - 1/4 (0.170 mi.)	D18	31

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Registered Storage Tanks

CA FID UST: 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, and dated 10/31/1994 has revealed that there are 4 CA FID UST sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
GARY PINNELLA	***4226 1ST ST***	***NW 0 - 1/8 (0.104 mi.)***	***A3***	***8***
GAS-N-SAVE	***4191 1ST ST***	***NW 0 - 1/8 (0.110 mi.)***	***B7***	***18***
ACP INC.	73 RAY ST	NW 1/8 - 1/4 (0.167 mi.)	D17	30
PACIFIC BELL	***120 RAY STREET***	***WNW 1/8 - 1/4 (0.170 mi.)***	***D19***	***31***

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 are 4 HIST UST sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
GARY PINNELLA	4226 1ST ST	NW 0 - 1/8 (0.104 mi.)	A4	14
GAS-N-SAVE	4191 1ST ST	NW 0 - 1/8 (0.110 mi.)	B6	17
ACP INC.	73 RAY ST STE B	NW 1/8 - 1/4 (0.167 mi.)	D15	29
PACIFIC BELL	***120 RAY STREET***	***WNW 1/8 - 1/4 (0.170 mi.)***	***D19***	***31***

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 5 SWEEPS UST sites within approximately 0.25 miles of the target property.

EXECUTIVE SUMMARY

Lower Elevation	Address	Direction / Distance	Map ID	Page
GARY PINNELLA	***4226 1ST ST***	***NW 0 - 1/8 (0.104 mi.)***	***A3***	***8***
GAS-N-SAVE	***4191 1ST ST***	***NW 0 - 1/8 (0.110 mi.)***	***B7***	***18***
UNOCAL SS# 7376	***4191 FIRST ST***	***NW 0 - 1/8 (0.110 mi.)***	***B9***	***24***
ACP INC.	73 RAY ST B	NW 1/8 - 1/4 (0.167 mi.)	D16	29
PACIFIC BELL	***120 RAY STREET***	***WNW 1/8 - 1/4 (0.170 mi.)***	***D19***	***31***

Other Ascertainable Records

HIST CORTESE: 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 [CALSITES]. This listing is no longer updated by the state agency.

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there are 8 HIST CORTESE sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
GARY PINNELLA	***4226 1ST ST***	***NW 0 - 1/8 (0.104 mi.)***	***A3***	***8***
GAS-N-SAVE	***4191 1ST ST***	***NW 0 - 1/8 (0.110 mi.)***	***B7***	***18***
INTERSTATE NUCLEAR SERVICES	***65 RAY***	***NW 1/8 - 1/4 (0.132 mi.)***	***14***	***27***
EL DORADO MOTEL	***3927 1ST***	***NNE 1/4 - 1/2 (0.252 mi.)***	***25***	***40***
CHEVRON #9-3934	***780 MAIN***	***WNW 1/4 - 1/2 (0.335 mi.)***	***F28***	***45***
UNOCAL SERVICE STATION #543	***992 MAIN ST***	***NW 1/4 - 1/2 (0.390 mi.)***	***29***	***46***
MOBIL SERVICE STATION	***1024 MAIN ST***	***NW 1/4 - 1/2 (0.408 mi.)***	***30***	***49***
EXXON R/S #A-7003	***349 MAIN ST***	***WSW 1/4 - 1/2 (0.483 mi.)***	***31***	***54***

EDR PROPRIETARY RECORDS

EDR Proprietary Records

EDR US Hist Auto Stat: EDR has searched selected national collections of business directories and has collected listings of potential 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 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, etc.

A review of the EDR US Hist Auto Stat list, as provided by EDR, has revealed that there are 4 EDR US Hist Auto Stat sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
Not reported	3935 VINEYARD AVE	ENE 1/8 - 1/4 (0.194 mi.)	23	39

Lower Elevation	Address	Direction / Distance	Map ID	Page
Not reported	4191 1ST ST	NW 0 - 1/8 (0.110 mi.)	B10	26
Not reported	4183 1ST ST	NNW 0 - 1/8 (0.111 mi.)	B11	27
Not reported	4019 1ST ST	N 1/8 - 1/4 (0.193 mi.)	E20	36

EXECUTIVE SUMMARY

EDR US Hist Cleaners: EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner 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 establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc.

A review of the EDR US Hist Cleaners list, as provided by EDR, has revealed that there are 3 EDR US Hist Cleaners sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
Not reported	285 KOTTINGER DR	SSW 0 - 1/8 (0.043 mi.)	2	8

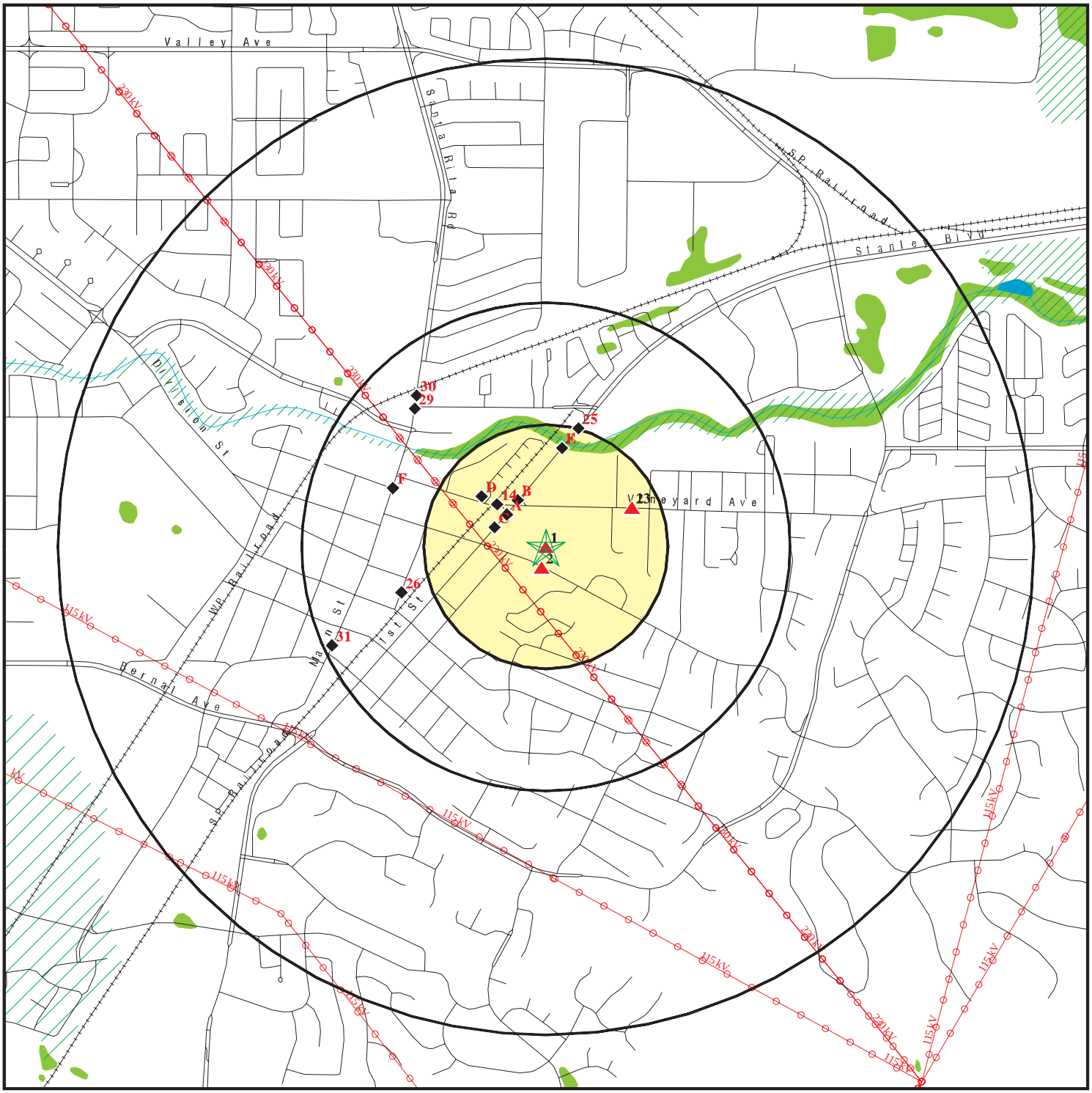
Lower Elevation	Address	Direction / Distance	Map ID	Page
Not reported	4241 1ST ST	WNW 0 - 1/8 (0.112 mi.)	C12	27
Not reported	4253 1ST ST	WNW 0 - 1/8 (0.116 mi.)	C13	27

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 5 records.

Site Name	Database(s)
SANTA RITA OLD GRAYSTONE	HIST CORTESE, LUST
AT&T COMMUNICATIONS	SWEEPS UST
CAMP PARKS COMMUNICATION ANNEX	CERC-NFRAP
SANTA RITA JAIL PROPERTY BURN PIT	SWF/LF
DUBLIN/HACIENDA INCINERATOR ASH SI	SWF/LF

OVERVIEW MAP - 3481821.2s



0 1/4 1/2 1 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 315504	CLIENT: AEI Consultants
ADDRESS: 240 & 251 Kottinger, 4138 Vineyard, 4133 Regalia Pleasanton CA 94566	CONTACT: Brooke INQUIRY #: 3481821.2s
LAT/LONG: 37.6619 / 121.8687	DATE: December 21, 2012 9:54 am

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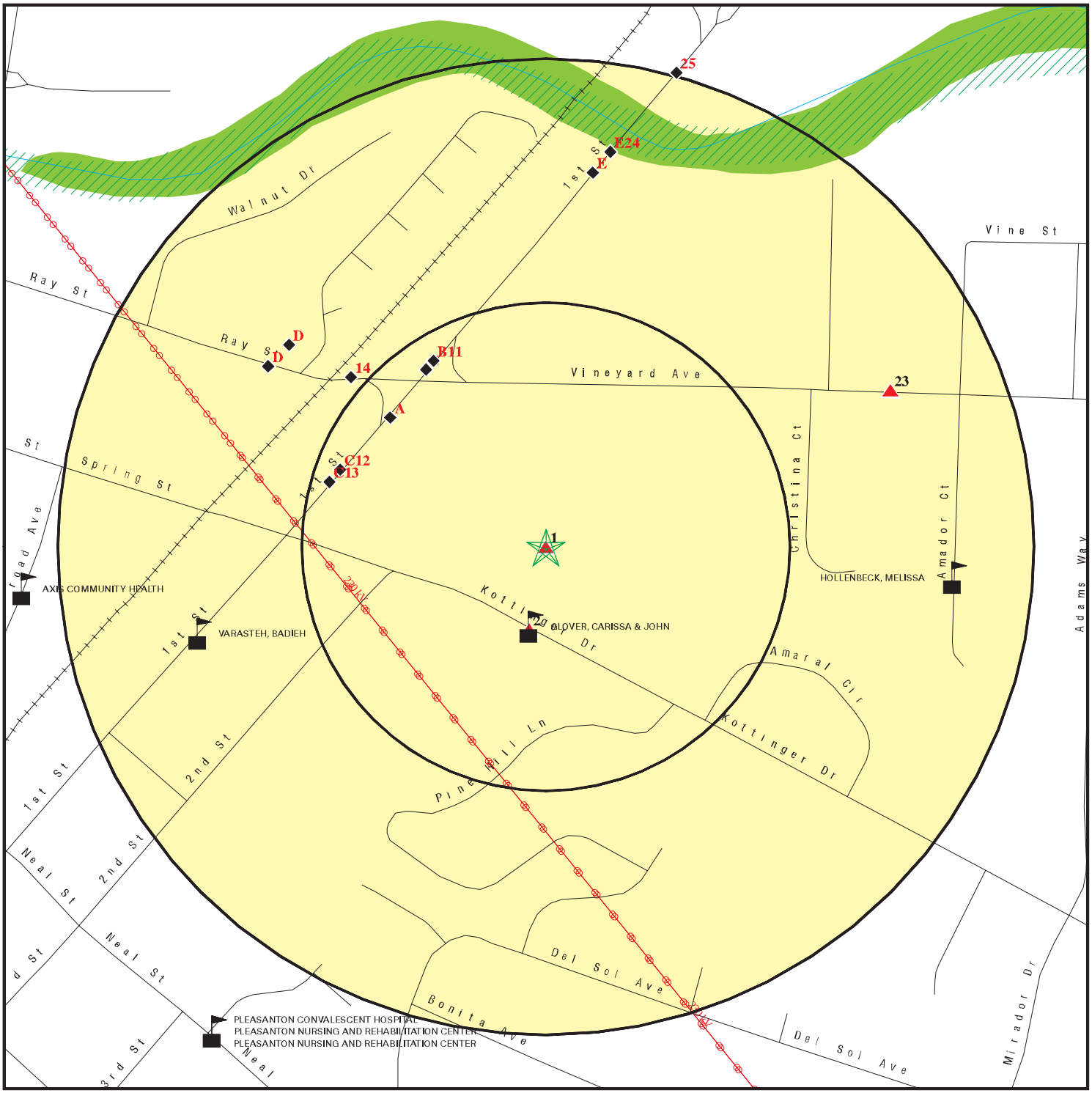
DETAIL MAP - 3481821.2s



0 1/16 1/8 1/4 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 315504 ADDRESS: 240 & 251 Kottinger, 4138 Vineyard, 4133 Regalia Pleasanton CA 94566 LAT/LONG: 37.6619 / 121.8687	CLIENT: AEI Consultants CONTACT: Brooke INQUIRY #: 3481821.2s DATE: December 21, 2012 9:55 am

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS	0.500		0	0	0	NR	NR	0
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		1	0	NR	NR	NR	1
RCRA-SQG	0.250		0	4	NR	NR	NR	4
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
LUCIS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		0	0	0	0	NR	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
WDS	TP		NR	NR	NR	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		2	1	7	NR	NR	10

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
SLIC	0.500		0	0	0	NR	NR	0
Alameda County CS	0.500		2	1	6	NR	NR	9
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
UST	0.250		1	1	NR	NR	NR	2
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
FEMA UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	TP		NR	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL	TP		NR	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
US HIST CDL	TP		NR	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
CA FID UST	0.250		2	2	NR	NR	NR	4
HIST UST	0.250		2	2	NR	NR	NR	4
SWEEPS UST	0.250		3	2	NR	NR	NR	5
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
LIENS	TP		NR	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
CHMIRS	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LDS	TP		NR	NR	NR	NR	NR	0
MCS	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA-NonGen	0.250		0	0	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
DOD	1.000		0	0	0	0	NR	0
FUDS	1.000		0	0	0	0	NR	0
CONSENT	1.000		0	0	0	0	NR	0
ROD	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
MINES	0.250		0	0	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
Cortese	0.500		0	0	0	NR	NR	0
HIST CORTESE	0.500		2	1	5	NR	NR	8
CUPA Listings	0.250		0	0	NR	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
HAZNET	TP	1	NR	NR	NR	NR	NR	1
EMI	TP		NR	NR	NR	NR	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
HWT	0.250		0	0	NR	NR	NR	0
HWP	1.000		0	0	0	0	NR	0
FINANCIAL ASSURANCE	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
EDR PROPRIETARY RECORDS								
EDR Proprietary Records								
EDR MGP	1.000		0	0	0	0	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
EDR US Hist Auto Stat	0.250		2	2	NR	NR	NR	4
EDR US Hist Cleaners	0.250		3	0	NR	NR	NR	3

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

1
Target
Property

Actual:
378 ft.

CITY OF PLEASANTON
4138 VINEYARD AVE
PLEASANTON, CA 94566

HAZNET **S111852463**
N/A

HAZNET:

Year:	2011
Gepaid:	CAC002677201
Contact:	CHRIS RIZZOLI
Telephone:	9259315584
Mailing Name:	Not reported
Mailing Address:	123 MAIN ST
Mailing City,St,Zip:	PLEASANTON, CA 945667320
Gen County:	Not reported
TSD EPA ID:	CAD982042475
TSD County:	Not reported
Waste Category:	Asbestos containing waste
Disposal Method:	Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons:	0.8
Facility County:	Alameda

2
SSW
< 1/8
0.043 mi.
229 ft.

Relative:
Higher

Actual:
379 ft.

285 KOTTINGER DR
PLEASANTON, CA 94566

EDR US Hist Cleaners **1015034679**
N/A

A3
NW
< 1/8
0.104 mi.
547 ft.

Relative:
Lower

Actual:
368 ft.

GARY PINNELLA
4226 1ST ST
PLEASANTON, CA 94566

Site 1 of 3 in cluster A

HIST CORTESE **S101624068**
LUST **N/A**
CA FID UST
Alameda County CS
SWEEPS UST
HAZNET

CORTESE:

Region:	CORTESE
Facility County Code:	1
Reg By:	LTNKA
Reg Id:	01-1364

LUST:

Region:	STATE
Global Id:	T0600101259
Latitude:	37.662912265
Longitude:	-121.8698585
Case Type:	LUST Cleanup Site
Status:	Open - Assessment & Interim Remedial Action
Status Date:	03/02/2010
Lead Agency:	ALAMEDA COUNTY LOP
Case Worker:	JTW
Local Agency:	ALAMEDA COUNTY LOP
RB Case Number:	01-1364
LOC Case Number:	RO0000360

GARY PINNELLA (Continued) **S101624068**

File Location: Stored electronically as an E-file
Potential Media Affect: Aquifer used for drinking water supply
Potential Contaminants of Concern: Gasoline
Site History: The site is an active Shell-branded service station located at the corner of First Street and Vineyard Avenue in a mixed residential and commercial area of Pleasanton, CA. Site investigation activities have been completed and pilot testing is underway to evaluate remedial technologies.

Click here to access the California GeoTracker records for this facility:

LUST:
Global Id: T0600101259
Contact Type: Regional Board Caseworker
Contact Name: Cherie McCaulou
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)
Address: 1515 CLAY STREET, SUITE 1400
City: OAKLAND
Email: cmccaulou@waterboards.ca.gov
Phone Number: Not reported

Global Id: T0600101259
Contact Type: Local Agency Caseworker
Contact Name: JERRY WICKHAM
Organization Name: ALAMEDA COUNTY LOP
Address: 1131 HARBOR BAY PARKWAY
City: ALAMEDA
Email: Not reported
Phone Number: 5105676791

LUST:
Global Id: T0600101259
Action Type: ENFORCEMENT
Date: 08/07/2009
Action: Staff Letter - #20090807

Global Id: T0600101259
Action Type: REMEDIATION
Date: 01/01/1950
Action: In Situ Physical/Chemical Treatment (other than SVE)

Global Id: T0600101259
Action Type: ENFORCEMENT
Date: 06/05/2012
Action: Staff Letter - #20120605

Global Id: T0600101259
Action Type: ENFORCEMENT
Date: 03/27/2009
Action: Staff Letter - #20090327

Global Id: T0600101259
Action Type: ENFORCEMENT
Date: 07/14/2009
Action: Staff Letter - #20090714

Global Id: T0600101259

GARY PINNELLA (Continued) **S101624068**

Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0600101259
Action Type: ENFORCEMENT
Date: 03/28/2012
Action: Meeting - #20120328

Global Id: T0600101259
Action Type: ENFORCEMENT
Date: 01/05/2012
Action: Staff Letter - #20120105

Global Id: T0600101259
Action Type: Other
Date: 01/01/1950
Action: Leak Stopped

Global Id: T0600101259
Action Type: ENFORCEMENT
Date: 08/18/2011
Action: Staff Letter - #20110818

Global Id: T0600101259
Action Type: RESPONSE
Date: 07/31/2011
Action: Well Installation Report

Global Id: T0600101259
Action Type: RESPONSE
Date: 03/14/2008
Action: Corrective Action Plan / Remedial Action Plan

Global Id: T0600101259
Action Type: RESPONSE
Date: 04/13/2012
Action: Pilot Study / Treatability Workplan

Global Id: T0600101259
Action Type: ENFORCEMENT
Date: 12/14/2007
Action: * NEL - #20071214

Global Id: T0600101259
Action Type: RESPONSE
Date: 10/26/2011
Action: Pilot Study / Treatability Workplan

Global Id: T0600101259
Action Type: RESPONSE
Date: 06/04/2010
Action: Interim Remedial Action Report

Global Id: T0600101259
Action Type: ENFORCEMENT
Date: 06/26/2012

GARY PINNELLA (Continued) **S101624068**

Action: Staff Letter - #20120626

Global Id: T0600101259
Action Type: ENFORCEMENT
Date: 06/25/2012
Action: Staff Letter - #20120625

Global Id: T0600101259
Action Type: RESPONSE
Date: 10/30/2012
Action: Pilot Study/ Treatability Report

Global Id: T0600101259
Action Type: RESPONSE
Date: 10/03/2012
Action: Soil Vapor Intrusion Investigation Report

Global Id: T0600101259
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0600101259
Action Type: ENFORCEMENT
Date: 09/09/2008
Action: Staff Letter - #20080909

Global Id: T0600101259
Action Type: ENFORCEMENT
Date: 03/14/2011
Action: Staff Letter - #20110314

LUST REG 2:
Region: 2
Facility Id: 01-1364
Facility Status: Leak being confirmed
Case Number: 1646
How Discovered: Tank Closure
Leak Cause: Structure Failure
Leak Source: Tank
Date Leak Confirmed: 5/18/1995
Oversight Program: LUST
Prelim. Site Assesment Wokplan Submitted: Not reported
Preliminary Site Assesment Began: Not reported
Pollution Characterization Began: Not reported
Pollution Remediation Plan Submitted: Not reported
Date Remediation Action Underway: Not reported
Date Post Remedial Action Monitoring Began: Not reported

CA FID UST:
Facility ID: 01001476
Regulated By: UTNKA
Regulated ID: 00001923
Cortese Code: Not reported
SIC Code: Not reported

GARY PINNELLA (Continued) **S101624068**

Facility Phone: 4158466333
Mail To: Not reported
Mailing Address: P O BOX
Mailing Address 2: Not reported
Mailing City,St,Zip: PLEASANTON 94566
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

Alameda County CS:
Status: Pollution Characterization
Record Id: RO0000360
Site Contact: Not reported
PE: 5602

SWEEPS UST:
Status: A
Comp Number: 1923
Number: 9
Board Of Equalization: 44-000987
Ref Date: 07-01-85
Act Date: Not reported
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: 5
Swrcb Tank Id: 01-006-001923-000001
Actv Date: 07-01-85
Capacity: 8000
Tank Use: M.V. FUEL
Stg: P
Content: DIESEL
Number Of Tanks: 5

Status: A
Comp Number: 1923
Number: 9
Board Of Equalization: 44-000987
Ref Date: 07-01-85
Act Date: Not reported
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: 4
Swrcb Tank Id: 01-006-001923-000002
Actv Date: 07-01-85
Capacity: 8000
Tank Use: M.V. FUEL
Stg: P
Content: REG UNLEADED
Number Of Tanks: Not reported

Status: A
Comp Number: 1923

GARY PINNELLA (Continued) **S101624068**

Number: 9
Board Of Equalization: 44-000987
Ref Date: 07-01-85
Act Date: Not reported
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: 3
Swrcb Tank Id: 01-006-001923-000003
Actv Date: 07-01-85
Capacity: 5000
Tank Use: M.V. FUEL
Stg: P
Content: LEADED
Number Of Tanks: Not reported

Status: A
Comp Number: 1923
Number: 9
Board Of Equalization: 44-000987
Ref Date: 07-01-85
Act Date: Not reported
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: 1
Swrcb Tank Id: 01-006-001923-000004
Actv Date: 07-01-85
Capacity: 5000
Tank Use: M.V. FUEL
Stg: P
Content: REG UNLEADED
Number Of Tanks: Not reported

Status: A
Comp Number: 1923
Number: 9
Board Of Equalization: 44-000987
Ref Date: 07-01-85
Act Date: Not reported
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: 2
Swrcb Tank Id: 01-006-001923-000005
Actv Date: 07-01-85
Capacity: 550
Tank Use: OIL
Stg: W
Content: WASTE OIL
Number Of Tanks: Not reported

HAZNET:
Year: 2003
Gepaid: CAL000019769
Contact: HAS ANOTHER NUMBER
Telephone: 0
Mailing Name: DO NOT USE INACTIVE ID NUMBER
Mailing Address: 4226 1ST ST
Mailing City,St,Zip: PLEASANTON, CA 945667124

GARY PINNELLA (Continued) **S101624068**

Gen County: Alameda
TSD EPA ID: CA0000084517
TSD County: Alameda
Waste Category: Aqueous solution with total organic residues less than 10 percent
Disposal Method: Transfer Station
Tons: 0.14
Facility County: 1

A4 **GARY PINNELLA** **HIST UST** **U001598015**
NW **4226 1ST ST** **N/A**
< 1/8 **PLEASANTON, CA 94566**
0.104 mi.
547 ft. **Site 2 of 3 in cluster A**

Relative:
Lower

Actual:
368 ft.

HIST UST:
Region: STATE
Facility ID: 00000001923
Facility Type: Gas Station
Other Type: Not reported
Total Tanks: 0005
Contact Name: GARY PINNELLA
Telephone: 4158466333
Owner Name: SHELL OIL COMPANY
Owner Address: P.O. BOX 4848
Owner City,St,Zip: ANAHEIM, CA 92803

Tank Num: 001
Container Num: 5
Year Installed: 1970
Tank Capacity: 00008000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Tank Construction: 1/4 inches
Leak Detection: Stock Inventor, 10

Tank Num: 002
Container Num: 4
Year Installed: 1967
Tank Capacity: 00008000
Tank Used for: PRODUCT
Type of Fuel: PREMIUM
Tank Construction: 1/4 inches
Leak Detection: Stock Inventor, 10

Tank Num: 003
Container Num: 3
Year Installed: 1967
Tank Capacity: 00005000
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Tank Construction: 1/4 inches
Leak Detection: Stock Inventor, 10

Tank Num: 004
Container Num: 1
Year Installed: 1967
Tank Capacity: 00005000
Tank Used for: PRODUCT

GARY PINNELLA (Continued) **U001598015**

Type of Fuel: UNLEADED
Tank Construction: 1/4 inches
Leak Detection: Stock Inventor, 10

Tank Num: 005
Container Num: 2
Year Installed: 1967
Tank Capacity: 00000550
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Tank Construction: 12 gauge
Leak Detection: Stock Inventor, 10

A5 **SERVICE STATION - 135782** **RCRA-LQG** **1009398347**
NW **4226 FIRST STREET** **CAR000173674**
< 1/8 **PLEASANTON, CA 94566**
0.104 mi.
547 ft. **Site 3 of 3 in cluster A**

Relative:
Lower

Actual:
368 ft.

RCRA-LQG:
Date form received by agency: 03/01/2008
Facility name: SERVICE STATION - 135782
Facility address: 4226 FIRST STREET
PLEASANTON, CA 94566
EPA ID: CAR000173674
Mailing address: 12700 NORTHBOROUGH DR, 300G04
HOUSTON, TX 77067
Contact: DON F WISDOM
Contact address: Not reported
Not reported
Contact country: Not reported
Contact telephone: (281) 874-2238
Contact email: DON.F.WISDOM@SHELL.COM
EPA Region: 09
Classification: Large Quantity Generator
Description: Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:
Owner/operator name: EQUILON ENTERPRISES LLC
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 08/01/1998

SERVICE STATION - 135782 (Continued) **1009398347**

Owner/Op end date: Not reported

Owner/operator name: SHELL OIL PRODUCTS US
Owner/operator address: PO BOX 2099
HOUSTON, TX 77252
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 08/01/1998
Owner/Op end date: Not reported

Owner/operator name: SHELL OIL PRODUCTS US
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 08/01/1998
Owner/Op end date: Not reported

Owner/operator name: EQUILON ENTERPRISES LLC
Owner/operator address: PO BOX 2648
HOUSTON, TX 77252
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 08/01/1998
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 05/05/2006
Facility name: SERVICE STATION - 135782
Site name: SHELL OIL PRODUCTS US SAP 135782
Classification: Small Quantity Generator

SERVICE STATION - 135782 (Continued) **1009398347**

Hazardous Waste Summary:

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D008
Waste name: LEAD

Waste code: D018
Waste name: BENZENE

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D008
Waste name: LEAD

Waste code: D018
Waste name: BENZENE

Waste code: D039
Waste name: TETRACHLOROETHYLENE

Waste code: D040
Waste name: TRICHLOROETHYLENE

Violation Status: No violations found

B6 **GAS-N-SAVE** **HIST UST** **U001598016**
NW **4191 1ST ST** **N/A**
< 1/8 **PLEASANTON, CA 94566**
0.110 mi.
579 ft. **Site 1 of 6 in cluster B**

Relative:
Lower

Actual:
368 ft.

HIST UST:
Region: STATE
Facility ID: 00000008742
Facility Type: Gas Station
Other Type: Not reported
Total Tanks: 0004
Contact Name: THOMAS TERRY
Telephone: 4154621365
Owner Name: ARMOUR OIL COMPANY
Owner Address: 3500 ESTUDILLO ST.
Owner City,St,Zip: SAN DIEGO, CA 92110

Tank Num: 001

GAS-N-SAVE (Continued) **U001598016**

Container Num: 88-1
Year Installed: Not reported
Tank Capacity: 00012000
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 002
Container Num: 88-2
Year Installed: Not reported
Tank Capacity: 00012000
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 003
Container Num: 88-3
Year Installed: Not reported
Tank Capacity: 00012000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 004
Container Num: 88-4
Year Installed: Not reported
Tank Capacity: 00012000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: Stock Inventor

B7 **GAS-N-SAVE** **HIST CORTESE** **S101630323**
NW **4191 1ST ST** **LUST** **N/A**
< 1/8 **PLEASANTON, CA 94566** **CA FID UST**
0.110 mi. **Alameda County CS**
579 ft. **Site 2 of 6 in cluster B** **SWEEPS UST**

Relative:
Lower

Actual:
368 ft.

CORTESE:
Region: CORTESE
Facility County Code: 1
Reg By: LTNKA
Reg Id: 01-0109

LUST:
Region: STATE
Global Id: T0600100101
Latitude: 37.6635968258163
Longitude: -121.869814395905
Case Type: LUST Cleanup Site
Status: Open - Remediation
Status Date: 11/16/2011
Lead Agency: SAN FRANCISCO BAY RWQCB (REGION 2)
Case Worker: MYM

GAS-N-SAVE (Continued) **S101630323**

Local Agency: Not reported
RB Case Number: 01-0109
LOC Case Number: RO0000361
File Location: Stored electronically as an E-file
Potential Media Affect: Aquifer used for drinking water supply
Potential Contaminants of Concern: Gasoline
Site History: An Unauthorized Release Form was filed in 1994 following identification of gasoline/waste oil contamination during product piping replacement. Site investigation activities have been conducted on-site and off-site in the downgradient direction (north) since 1987. A mixed plume of lighter fraction fuel hydrocarbons in the gasoline range and heavier fuel hydrocarbons in the Bunker fuel range have migrated northward from the site beneath a transportation corridor. A Corrective Action Plan has been completed to implement soil vapor extraction (SVE) for site cleanup. Remedial design of the SVE system is currently underway. Not all historic documents for the fuel leak case may be available on GeoTracker. A more complete historic case file for this site is located on the Alameda County Environmental Health website at: http://ehgis.acgov.org/dehpublic/dehpublic.jsp

Click here to access the California GeoTracker records for this facility:

LUST:
Global Id: T0600100101
Contact Type: Regional Board Caseworker
Contact Name: MARTIN MUSONGE
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)
Address: 1515 CLAY STREET
City: OAKLAND
Email: mmusonge@waterboards.ca.gov
Phone Number: Not reported

LUST:
Global Id: T0600100101
Action Type: ENFORCEMENT
Date: 03/21/2008
Action: Staff Letter - #20080321

Global Id: T0600100101
Action Type: ENFORCEMENT
Date: 10/19/2010
Action: Staff Letter - #20101019

Global Id: T0600100101
Action Type: ENFORCEMENT
Date: 11/16/2011
Action: Staff Letter - #20111116

Global Id: T0600100101
Action Type: ENFORCEMENT
Date: 10/19/2010
Action: Notification - Public Notice of ROD/RAP/CAP - #20101019

Global Id: T0600100101
Action Type: ENFORCEMENT
Date: 03/27/2009

GAS-N-SAVE (Continued) **S101630323**

Action: Staff Letter - #20090327

Global Id: T0600100101
Action Type: RESPONSE
Date: 03/09/2012
Action: Other Report / Document

Global Id: T0600100101
Action Type: RESPONSE
Date: 07/23/2010
Action: CAP/RAP - Feasibility Study Report

Global Id: T0600100101
Action Type: RESPONSE
Date: 05/07/2010
Action: Pilot Study/ Treatability Report

Global Id: T0600100101
Action Type: RESPONSE
Date: 10/06/2010
Action: CAP/RAP - Feasibility Study Report

Global Id: T0600100101
Action Type: RESPONSE
Date: 12/22/2009
Action: Pilot Study / Treatability Workplan

Global Id: T0600100101
Action Type: ENFORCEMENT
Date: 05/31/2012
Action: Referral to Regional Board - #20120531

Global Id: T0600100101
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0600100101
Action Type: RESPONSE
Date: 11/17/2011
Action: Remedial Progress Report

Global Id: T0600100101
Action Type: REMEDIATION
Date: 01/01/1950
Action: Soil Vapor Extraction (SVE)

Global Id: T0600100101
Action Type: ENFORCEMENT
Date: 11/29/2005
Action: Staff Letter - #20051129

Global Id: T0600100101
Action Type: Other
Date: 01/01/1950
Action: Leak Stopped

GAS-N-SAVE (Continued) **S101630323**

Global Id: T0600100101
Action Type: ENFORCEMENT
Date: 02/01/2011
Action: Staff Letter - #20110201

Global Id: T0600100101
Action Type: ENFORCEMENT
Date: 12/21/2011
Action: Staff Letter - #20111221

Global Id: T0600100101
Action Type: RESPONSE
Date: 03/03/2011
Action: CAP/RAP - Final Remediation / Design Plan

Global Id: T0600100101
Action Type: ENFORCEMENT
Date: 03/17/2011
Action: Staff Letter - #20110317

Global Id: T0600100101
Action Type: ENFORCEMENT
Date: 08/25/2010
Action: Staff Letter - #20100825

Global Id: T0600100101
Action Type: ENFORCEMENT
Date: 01/06/2010
Action: Staff Letter - #20100106

Global Id: T0600100101
Action Type: ENFORCEMENT
Date: 07/23/2009
Action: Staff Letter - #20090723

Global Id: T0600100101
Action Type: RESPONSE
Date: 11/08/1982
Action: Correspondence

Global Id: T0600100101
Action Type: ENFORCEMENT
Date: 10/16/2009
Action: Staff Letter - #20091016

Global Id: T0600100101
Action Type: RESPONSE
Date: 05/14/2010
Action: Pilot Study/ Treatability Report

Global Id: T0600100101
Action Type: ENFORCEMENT
Date: 04/18/2012
Action: Technical Correspondence / Assistance / Other - #20120418

Global Id: T0600100101
Action Type: ENFORCEMENT

GAS-N-SAVE (Continued) **S101630323**

Date: 07/30/2008
Action: Staff Letter - #20080730

Global Id: T0600100101
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0600100101
Action Type: ENFORCEMENT
Date: 06/09/2010
Action: Staff Letter - #2010-06-09

Global Id: T0600100101
Action Type: RESPONSE
Date: 12/20/2010
Action: Corrective Action Plan / Remedial Action Plan

LUST REG 2:
Region: 2
Facility Id: 01-0109
Facility Status: Preliminary site assessment underway
Case Number: 5017
How Discovered: Tank Closure
Leak Cause: Structure Failure
Leak Source: Tank
Date Leak Confirmed: Not reported
Oversight Program: LUST
Prelim. Site Assesment Wokplan Submitted: Not reported
Preliminary Site Assesment Began: 3/13/1990
Pollution Characterization Began: Not reported
Pollution Remediation Plan Submitted: Not reported
Date Remediation Action Underway: Not reported
Date Post Remedial Action Monitoring Began: Not reported

CA FID UST:
Facility ID: 01000225
Regulated By: UTNKI
Regulated ID: 00008742
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 4154621365
Mail To: Not reported
Mailing Address: 4191 1ST ST
Mailing Address 2: Not reported
Mailing City,St,Zip: PLEASANTON 94566
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Inactive

GAS-N-SAVE (Continued) **S101630323**

Alameda County CS:

Status:	11
Record Id:	RO0000361
Site Contact:	Not reported
PE:	5602

Status:	Pollution Characterization
Record Id:	RO0000361
Site Contact:	Not reported
PE:	5602

SWEEPS UST:

Status:	Not reported
Comp Number:	8742
Number:	Not reported
Board Of Equalization:	Not reported
Ref Date:	Not reported
Act Date:	Not reported
Created Date:	Not reported
Tank Status:	Not reported
Owner Tank Id:	Not reported
Swrcb Tank Id:	01-006-008742-000001
Actv Date:	Not reported
Capacity:	12000
Tank Use:	M.V. FUEL
Stg:	PRODUCT
Content:	LEADED
Number Of Tanks:	4

Status:	Not reported
Comp Number:	8742
Number:	Not reported
Board Of Equalization:	Not reported
Ref Date:	Not reported
Act Date:	Not reported
Created Date:	Not reported
Tank Status:	Not reported
Owner Tank Id:	Not reported
Swrcb Tank Id:	01-006-008742-000002
Actv Date:	Not reported
Capacity:	12000
Tank Use:	M.V. FUEL
Stg:	PRODUCT
Content:	LEADED
Number Of Tanks:	Not reported

Status:	Not reported
Comp Number:	8742
Number:	Not reported
Board Of Equalization:	Not reported
Ref Date:	Not reported
Act Date:	Not reported
Created Date:	Not reported
Tank Status:	Not reported
Owner Tank Id:	Not reported
Swrcb Tank Id:	01-006-008742-000003

GAS-N-SAVE (Continued) **S101630323**

Actv Date:	Not reported
Capacity:	12000
Tank Use:	M.V. FUEL
Stg:	PRODUCT
Content:	REG UNLEADED
Number Of Tanks:	Not reported

Status:	Not reported
Comp Number:	8742
Number:	Not reported
Board Of Equalization:	Not reported
Ref Date:	Not reported
Act Date:	Not reported
Created Date:	Not reported
Tank Status:	Not reported
Owner Tank Id:	Not reported
Swrcb Tank Id:	01-006-008742-000004
Actv Date:	Not reported
Capacity:	12000
Tank Use:	M.V. FUEL
Stg:	PRODUCT
Content:	REG UNLEADED
Number Of Tanks:	Not reported

B8 **TOSCO CORPORATION, SITE NO.7376(31326)** **UST** **U003776584**
NW **4191 FIRST ST.** **N/A**
< 1/8 **PLEASANTON, CA 94566**
0.110 mi.
579 ft. **Site 3 of 6 in cluster B**

Relative:
Lower

Actual:
368 ft.

UST:

Facility ID:	01-006-000980
Latitude:	37.66321
Longitude:	-121.86982

B9 **UNOCAL SS# 7376** **SWEEPS UST** **S105633533**
NW **4191 FIRST ST** **CHMIRS** **N/A**
< 1/8 **PLEASANTON, CA 94566**
0.110 mi.
579 ft. **Site 4 of 6 in cluster B**

Relative:
Lower

Actual:
368 ft.

SWEEPS UST:

Status:	A
Comp Number:	980
Number:	1
Board Of Equalization:	44-001057
Ref Date:	07-20-93
Act Date:	03-11-94
Created Date:	03-11-94
Tank Status:	A
Owner Tank Id:	7376-22
Swrcb Tank Id:	01-006-000980-000001
Actv Date:	07-20-93
Capacity:	12000
Tank Use:	M.V. FUEL
Stg:	P

UNOCAL SS# 7376 (Continued) **S105633533**

Content:	PRM UNLEADED
Number Of Tanks:	2
Status:	A
Comp Number:	980
Number:	1
Board Of Equalization:	44-001057
Ref Date:	07-20-93
Act Date:	03-11-94
Created Date:	03-11-94
Tank Status:	A
Owner Tank Id:	7376-11
Swrcb Tank Id:	01-006-000980-000002
Actv Date:	07-20-93
Capacity:	12000
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	Not reported

CHMIRS:

OES Incident Number:	4607
OES notification:	Not reported
OES Date:	10/11/1994
OES Time:	10:08:21 AM
Incident Date:	Not reported
Date Completed:	**Not reported**
Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported
Property Management:	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
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	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

UNOCAL SS# 7376 (Continued) **S105633533**

Facility Telephone:	Not reported
Waterway Involved:	YES
Waterway:	Not reported
Spill Site:	Not reported
Cleanup By:	unocal
Containment:	Not reported
What Happened:	Not reported
Type:	PETROLEUM
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported
Year:	1994
Agency:	unocal
Incident Date:	09/12/94 1300
Admin Agency:	Not reported
Amount:	unknown
Contained:	NO
Site Type:	S/S
E Date:	Not reported
Substance:	gasoline
Quantity Released:	Not reported
BBLS:	Not reported
Cups:	Not reported
CUFT:	Not reported
Gallons:	Not reported
Grams:	Not reported
Pounds:	Not reported
Liters:	Not reported
Ounces:	Not reported
Pints:	Not reported
Quarts:	Not reported
Sheen:	Not reported
Tons:	Not reported
Unknown:	Not reported
Evacuations:	NO
Number of Injuries:	NO
Number of Fatalities:	NO
Description:	during soil sampling and field screening for piping minor concentrations detected.

B10 **EDR US Hist Auto Stat** **1015484956**
NW **4191 1ST ST** **N/A**
< 1/8 **PLEASANTON, CA 94566**
0.110 mi.
579 ft. **Site 5 of 6 in cluster B**

Relative:
Lower

Actual:
368 ft.

B11
NNW
< 1/8
0.111 mi.
588 ft.

4183 1ST ST
PLEASANTON, CA 94566

Site 6 of 6 in cluster B

EDR US Hist Auto Stat **1015484532**
N/A

Relative:
Lower

Actual:
368 ft.

C12
WNW
< 1/8
0.112 mi.
594 ft.

4241 1ST ST
PLEASANTON, CA 94566

Site 1 of 2 in cluster C

EDR US Hist Cleaners **1015059526**
N/A

Relative:
Lower

Actual:
369 ft.

C13
WNW
< 1/8
0.116 mi.
611 ft.

4253 1ST ST
PLEASANTON, CA 94566

Site 2 of 2 in cluster C

EDR US Hist Cleaners **1015059720**
N/A

Relative:
Lower

Actual:
369 ft.

14
NW
1/8-1/4
0.132 mi.
699 ft.

INTERSTATE NUCLEAR SERVICES
65 RAY
PLEASANTON, CA 94566

HIST CORTESE **S102434509**
LUST **N/A**
Alameda County CS

Relative:
Lower

Actual:
365 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	1
Reg By:	LTNKA
Reg Id:	01-2205

LUST:

Region:	STATE
Global Id:	T0600102024
Latitude:	37.663156
Longitude:	-121.8701708
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	02/11/1997
Lead Agency:	ALAMEDA COUNTY LOP
Case Worker:	SOS
Local Agency:	ALAMEDA COUNTY LOP
RB Case Number:	01-2205
LOC Case Number:	RO0000696

INTERSTATE NUCLEAR SERVICES (Continued) **S102434509**

File Location: Stored electronically as an E-file
Potential Media Affect: Aquifer used for drinking water supply
Potential Contaminants of Concern: Gasoline
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

LUST:
Global Id: T0600102024
Contact Type: Regional Board Caseworker
Contact Name: Cherie McCaulou
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)
Address: 1515 CLAY STREET, SUITE 1400
City: OAKLAND
Email: cmccaulou@waterboards.ca.gov
Phone Number: Not reported

Global Id: T0600102024
Contact Type: Local Agency Caseworker
Contact Name: SCOTT SEERY
Organization Name: ALAMEDA COUNTY LOP
Address: 1131 HARBOR BAY PARKWAY
City: ALAMEDA
Email: Not reported
Phone Number: Not reported

LUST:
Global Id: T0600102024
Action Type: REMEDIATION
Date: 01/01/1950
Action: Excavation

Global Id: T0600102024
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

LUST REG 2:
Region: 2
Facility Id: 01-2205
Facility Status: Case Closed
Case Number: 5802
How Discovered: Tank Closure
Leak Cause: Corrosion
Leak Source: UNK
Date Leak Confirmed: 1/30/1997
Oversight Program: LUST
Prelim. Site Assesment Wokplan Submitted: Not reported
Preliminary Site Assesment Began: Not reported
Pollution Characterization Began: Not reported
Pollution Remediation Plan Submitted: Not reported
Date Remediation Action Underway: Not reported
Date Post Remedial Action Monitoring Began: Not reported

Alameda County CS:

INTERSTATE NUCLEAR SERVICES (Continued) **S102434509**

Status: Case Closed
Record Id: RO0000696
Site Contact: Not reported
PE: 5602

D15 **ACP INC.** **HIST UST** **U001597958**
NW **73 RAY ST STE B** **N/A**
1/8-1/4 **PLEASANTON, CA 94566**
0.167 mi.
883 ft. **Site 1 of 5 in cluster D**

Relative:
Lower

Actual:
363 ft.

HIST UST:
Region: STATE
Facility ID: 00000001725
Facility Type: Other
Other Type: PLUMBING
Total Tanks: 0002
Contact Name: Not reported
Telephone: 4154629000
Owner Name: ACP INC.
Owner Address: 73 RAY ST. STE B
Owner City,St,Zip: PLEASANTON, CA 94566

Tank Num: 001
Container Num: 1
Year Installed: 1980
Tank Capacity: 00000500
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: None

Tank Num: 002
Container Num: 2
Year Installed: 1980
Tank Capacity: 00000500
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Tank Construction: Not reported
Leak Detection: None

D16 **ACP INC.** **SWEEPS UST** **S106922399**
NW **73 RAY ST B** **N/A**
1/8-1/4 **PLEASANTON, CA 94566**
0.167 mi.
883 ft. **Site 2 of 5 in cluster D**

Relative:
Lower

Actual:
363 ft.

SWEEPS UST:
Status: A
Comp Number: 1725
Number: 9
Board Of Equalization: 44-000986
Ref Date: 07-01-85
Act Date: Not reported
Created Date: 02-29-88
Tank Status: A

ACP INC. (Continued) **S106922399**

Owner Tank Id:	1
Swrcb Tank Id:	01-006-001725-000001
Actv Date:	07-01-85
Capacity:	500
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	2
Status:	A
Comp Number:	1725
Number:	9
Board Of Equalization:	44-000986
Ref Date:	07-01-85
Act Date:	Not reported
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	2
Swrcb Tank Id:	01-006-001725-000002
Actv Date:	07-01-85
Capacity:	500
Tank Use:	M.V. FUEL
Stg:	P
Content:	DIESEL
Number Of Tanks:	Not reported

D17 **ACP INC.** **CA FID UST** **S101580461**
NW **73 RAY ST** **N/A**
1/8-1/4 **PLEASANTON, CA 94566**
0.167 mi.
883 ft. **Site 3 of 5 in cluster D**

Relative:
Lower

Actual:
363 ft.

CA FID UST:

Facility ID:	01002937
Regulated By:	UTNKA
Regulated ID:	00001725
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	4154629000
Mail To:	Not reported
Mailing Address:	73 RAY ST
Mailing Address 2:	Not reported
Mailing City,St,Zip:	PLEASANTON 94566
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

D18 WNW 1/8-1/4 0.170 mi. 896 ft. | **SBC-CENTRAL OFFICE PE069** | **UST** | **U004049929**
120 RAY STREET | **N/A**
PLEASANTON, CA 94566

Site 4 of 5 in cluster D

Relative: Lower
Actual: 363 ft.

UST:
Facility ID: 449
Latitude: 37.66326
Longitude: -121.87136

D19 WNW 1/8-1/4 0.170 mi. 896 ft. | **PACIFIC BELL** | **RCRA-SQG, FINDS, CA FID UST, HIST UST, SWEEPS UST, EMI** | **1000251205**
120 RAY STREET | **CAT080020381**
PLEASANTON, CA 94566

Site 5 of 5 in cluster D

Relative: Lower
Actual: 363 ft.

RCRA-SQG:

Date form received by agency:	09/01/1996
Facility name:	PACIFIC BELL
Facility address:	120 RAY STREET PLEASANTON, CA 94566
EPA ID:	CAT080020381
Mailing address:	2 NORTH SECOND ST ROOM 1125 SAN JOSE, CA 95113
Contact:	Not reported
Contact address:	Not reported Not reported
Contact country:	Not reported
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	THE PACIFIC TELEPHONE AND TELEGRAPH CO
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported

PACIFIC BELL (Continued) **1000251205**

Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency: 04/09/1990
Facility name: PACIFIC BELL
Site name: PACIFIC BELL-PLEASTON
Classification: Large Quantity Generator

Date form received by agency: 01/19/1981
Facility name: PACIFIC BELL
Classification: Large Quantity Generator

Violation Status: No violations found

FINDS:

Registry ID: 110002949267

Environmental Interest/Information System

The NEI (National Emissions Inventory) database contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

CRITERIA AND HAZARDOUS AIR POLLUTANT INVENTORY

CA FID UST:

PACIFIC BELL (Continued) **1000251205**

Facility ID:	01002961
Regulated By:	UTNKA
Regulated ID:	00057837
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	4155426758
Mail To:	Not reported
Mailing Address:	370 3RD ST
Mailing Address 2:	Not reported
Mailing City,St,Zip:	PLEASANTON 94566
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

HIST UST:

Region:	STATE
Facility ID:	00000057837
Facility Type:	Other
Other Type:	SIC 4800
Total Tanks:	0001
Contact Name:	E.J.KOEHLER
Telephone:	4155426758
Owner Name:	PACIFIC BELL
Owner Address:	370 THIRD STREET
Owner City,St,Zip:	SAN FRANCISCO, CA 94107
Tank Num:	001
Container Num:	1
Year Installed:	1967
Tank Capacity:	00002000
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Tank Construction:	Not reported
Leak Detection:	None

SWEEPS UST:

Status:	A
Comp Number:	57837
Number:	9
Board Of Equalization:	44-001019
Ref Date:	07-01-85
Act Date:	Not reported
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	1
Swrcb Tank Id:	01-006-057837-000001
Actv Date:	07-01-85
Capacity:	2000
Tank Use:	M.V. FUEL
Stg:	P
Content:	DIESEL
Number Of Tanks:	1

PACIFIC BELL (Continued) **1000251205**

EMI:

Year:	2002
County Code:	1
Air Basin:	SF
Facility ID:	13507
Air District Name:	BA
SIC Code:	4813
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2003
County Code:	1
Air Basin:	SF
Facility ID:	13507
Air District Name:	BA
SIC Code:	4813
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2004
County Code:	1
Air Basin:	SF
Facility ID:	13507
Air District Name:	BA
SIC Code:	4813
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.037
Reactive Organic Gases Tons/Yr:	0.0309579
Carbon Monoxide Emissions Tons/Yr:	0.103
NOX - Oxides of Nitrogen Tons/Yr:	0.473
SOX - Oxides of Sulphur Tons/Yr:	0.007
Particulate Matter Tons/Yr:	0.034
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0.033184

Year:	2005
County Code:	1
Air Basin:	SF
Facility ID:	13507
Air District Name:	BA

PACIFIC BELL (Continued) **1000251205**

SIC Code:	4813
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.037
Reactive Organic Gases Tons/Yr:	.0309579
Carbon Monoxide Emissions Tons/Yr:	.103
NOX - Oxides of Nitrogen Tons/Yr:	.473
SOX - Oxides of Sulphur Tons/Yr:	.007
Particulate Matter Tons/Yr:	.034
Part. Matter 10 Micrometers & Smllr Tons/Yr:	.033184

Year:	2006
County Code:	1
Air Basin:	SF
Facility ID:	13507
Air District Name:	BA
SIC Code:	4813
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.002
Reactive Organic Gases Tons/Yr:	.0016734
Carbon Monoxide Emissions Tons/Yr:	.005
NOX - Oxides of Nitrogen Tons/Yr:	.025
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	.002
Part. Matter 10 Micrometers & Smllr Tons/Yr:	.001952

Year:	2007
County Code:	1
Air Basin:	SF
Facility ID:	13507
Air District Name:	BA
SIC Code:	4813
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.002
Reactive Organic Gases Tons/Yr:	.0016734
Carbon Monoxide Emissions Tons/Yr:	.005
NOX - Oxides of Nitrogen Tons/Yr:	.025
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	.002
Part. Matter 10 Micrometers & Smllr Tons/Yr:	.001952

Year:	2007
County Code:	1
Air Basin:	SF
Facility ID:	13507
Air District Name:	BA
SIC Code:	4813
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.01
Reactive Organic Gases Tons/Yr:	.008367

PACIFIC BELL (Continued) **1000251205**

Carbon Monoxide Emissions Tons/Yr:	.027
NOX - Oxides of Nitrogen Tons/Yr:	.124
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	.009
Part. Matter 10 Micrometers & Smllr Tons/Yr:	.008784

E20
North
1/8-1/4
0.193 mi.
1017 ft.

4019 1ST ST
PLEASANTON, CA 94566

Site 1 of 4 in cluster E

Relative:
Lower

Actual:
347 ft.

EDR US Hist Auto Stat **1015471873**
N/A

E21
North
1/8-1/4
0.193 mi.
1020 ft.

DECOITES AUTO BODY EMPORIUM
4019 1ST ST #5
LIVERMORE, CA 94550

Site 2 of 4 in cluster E

Relative:
Lower

Actual:
347 ft.

RCRA-SQG **1000332979**
FINDS **CAD982496754**

RCRA-SQG:

Date form received by agency:	05/14/1990
Facility name:	DECOITES AUTO BODY EMPORIUM
Facility address:	4019 1ST ST #5 LIVERMORE, CA 94550
EPA ID:	CAD982496754
Mailing address:	1ST ST #5 LIVERMORE, CA 94550
Contact:	ENVIRONMENTAL MANAGER
Contact address:	4019 1ST ST #5 LIVERMORE, CA 94550
Contact country:	US
Contact telephone:	(415) 443-3400
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	DECOITE ARLENE
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

DECOITES AUTO BODY EMPORIUM (Continued) **1000332979**

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110001198631

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

E22
North
1/8-1/4
0.193 mi.
1020 ft.

DAVIDSONS AUTO BODY REPAIR **RCRA-SQG** **1000248267**
4019 1ST ST #11 **FINDS** **CAD982012759**
LIVERMORE, CA 94551

Site 3 of 4 in cluster E

Relative:
Lower

Actual:
347 ft.

RCRA-SQG:
Date form received by agency: 07/14/1987
Facility name: DAVIDSONS AUTO BODY REPAIR
Facility address: 4019 1ST ST #11
LIVERMORE, CA 94550
EPA ID: CAD982012759
Mailing address: FIRST ST #11
LIVERMORE, CA 94550
Contact: ENVIRONMENTAL MANAGER
Contact address: 4019 FIRST ST #11

DAVIDSONS AUTO BODY REPAIR (Continued) **1000248267**

	LIVERMORE, CA 94550
Contact country:	US
Contact telephone:	(415) 449-6626
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	DAVIDSON SCOTT
Owner/operator address:	NOT REQUIRED
	NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported
Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED
	NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

FINDS:

Registry ID: 110002776167

Environmental Interest/Information System

DAVIDSONS AUTO BODY REPAIR (Continued) **1000248267**

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

23
ENE
1/8-1/4
0.194 mi.
1023 ft.

3935 VINEYARD AVE
PLEASANTON, CA 94566

EDR US Hist Auto Stat **1015464954**
N/A

Relative:
Higher

Actual:
388 ft.

E24
North
1/8-1/4
0.205 mi.
1082 ft.

FRANKLIN'S AUTO BODY
4030 1ST ST
LIVERMORE, CA 94550

RCRA-SQG **1000316994**
FINDS **CAD981161375**

Site 4 of 4 in cluster E

Relative:
Lower

Actual:
342 ft.

RCRA-SQG:

Date form received by agency:	09/01/1996
Facility name:	FRANKLIN'S AUTO BODY
Facility address:	4030 1ST ST LIVERMORE, CA 94550
EPA ID:	CAD981161375
Mailing address:	4043 FIRST ST LIVERMORE, CA 94550
Contact:	Not reported
Contact address:	Not reported Not reported
Contact country:	Not reported
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	B FRANKLIN
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

FRANKLIN'S AUTO BODY (Continued) **1000316994**

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 11/01/1985
Facility name: FRANKLIN'S AUTO BODY
Classification: Large Quantity Generator

Violation Status: No violations found

FINDS:

Registry ID: 110002678674

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

25
NNE
1/4-1/2
0.252 mi.
1330 ft.

EL DORADO MOTEL
3927 1ST
LIVERMORE, CA 94550

HIST CORTESE **S102429156**
LUST **N/A**
Alameda County CS

Relative:
Lower

Actual:
357 ft.

CORTESE:
Region: CORTESE
Facility County Code: 1
Reg By: LTNKA

EL DORADO MOTEL (Continued) **S102429156**

Reg Id: 01-0553

LUST:

Region:	STATE
Global Id:	T0600100506
Latitude:	37.69056
Longitude:	-121.751976
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	12/04/1995
Lead Agency:	ALAMEDA COUNTY LOP
Case Worker:	EC
Local Agency:	ALAMEDA COUNTY LOP
RB Case Number:	01-0553
LOC Case Number:	RO0000698
File Location:	Stored electronically as an E-file
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

LUST:

Global Id:	T0600100506
Contact Type:	Local Agency Caseworker
Contact Name:	EVA CHU
Organization Name:	ALAMEDA COUNTY LOP
Address:	1131 HARBOR BAY PARKWAY
City:	ALAMEDA
Email:	Not reported
Phone Number:	5105676762

Global Id:	T0600100506
Contact Type:	Regional Board Caseworker
Contact Name:	Cherie McCaulou
Organization Name:	SAN FRANCISCO BAY RWQCB (REGION 2)
Address:	1515 CLAY STREET, SUITE 1400
City:	OAKLAND
Email:	cmccaulou@waterboards.ca.gov
Phone Number:	Not reported

LUST:

Global Id:	T0600100506
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported

Global Id:	T0600100506
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Excavation

LUST REG 2:

Region:	2
Facility Id:	01-0553

EL DORADO MOTEL (Continued) **S102429156**

Facility Status: Case Closed
Case Number: 3600
How Discovered: Tank Closure
Leak Cause: Structure Failure
Leak Source: Tank
Date Leak Confirmed: Not reported
Oversight Program: LUST
Prelim. Site Assesment Wokplan Submitted: Not reported
Preliminary Site Assesment Began: 6/17/1991
Pollution Characterization Began: Not reported
Pollution Remediation Plan Submitted: Not reported
Date Remediation Action Underway: Not reported
Date Post Remedial Action Monitoring Began: Not reported

Alameda County CS:
Status: Case Closed
Record Id: RO0000698
Site Contact: Not reported
PE: 5602

26
WSW
1/4-1/2
0.310 mi.
1637 ft.

CITY OF PLEASANTON FIRE STATION #1
4444 RAILROAD AVE
PLEASANTON, CA 94566

LUST **S108241206**
Alameda County CS **N/A**

Relative:
Lower

Actual:
355 ft.

LUST:
Region: STATE
Global Id: T06019727284
Latitude: 37.660508
Longitude: -121.874135
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 09/19/2008
Lead Agency: ALAMEDA COUNTY LOP
Case Worker: JTW
Local Agency: ALAMEDA COUNTY LOP
RB Case Number: NA
LOC Case Number: RO0002923
File Location: Stored electronically as an E-file
Potential Media Affect: Under Investigation
Potential Contaminants of Concern: Gasoline
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

LUST:
Global Id: T06019727284
Contact Type: Local Agency Caseworker
Contact Name: JERRY WICKHAM
Organization Name: ALAMEDA COUNTY LOP
Address: 1131 HARBOR BAY PARKWAY
City: ALAMEDA
Email: Not reported
Phone Number: 5105676791

LUST:

CITY OF PLEASANTON FIRE STATION #1 (Continued) **S108241206**

Global Id: T06019727284
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T06019727284
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T06019727284
Action Type: ENFORCEMENT
Date: 07/03/2008
Action: Technical Correspondence / Assistance / Other - #20080703

Global Id: T06019727284
Action Type: ENFORCEMENT
Date: 09/19/2008
Action: Closure/No Further Action Letter - #20080919

Alameda County CS:
Status: Leak Confirmation
Record Id: RO0002923
Site Contact: Not reported
PE: 5602

Status: Preliminary Site Assessment Workplan Submitted
Record Id: RO0002923
Site Contact: Not reported
PE: 5602

Status: Pollution Characterization
Record Id: RO0002923
Site Contact: Not reported
PE: 5602

Status: Case Closed
Record Id: RO0002923
Site Contact: Not reported
PE: 5602

F27 **CHEVRON** **LUST** **S105030616**
WNW **780 MAIN ST** **SWEEPS UST** **N/A**
1/4-1/2 **PLEASANTON, CA 94566**
0.335 mi.
1771 ft. **Site 1 of 2 in cluster F**

Relative:
Lower

Actual:
347 ft.

LUST REG 2:
Region: 2
Facility Id: 01-1849
Facility Status: Case Closed
Case Number: RO0000657
How Discovered: Tank Closure
Leak Cause: UNK
Leak Source: Tank
Date Leak Confirmed: 11/19/1993

CHEVRON (Continued) **S105030616**

Oversight Program: LUST
Prelim. Site Assesment Wokplan Submitted: Not reported
Preliminary Site Assesment Began: Not reported
Pollution Characterization Began: Not reported
Pollution Remediation Plan Submitted: Not reported
Date Remediation Action Underway: Not reported
Date Post Remedial Action Monitoring Began: Not reported

SWEEPS UST:
Status: Not reported
Comp Number: 62544
Number: Not reported
Board Of Equalization: 44-031913
Ref Date: Not reported
Act Date: Not reported
Created Date: Not reported
Tank Status: Not reported
Owner Tank Id: Not reported
Swrcb Tank Id: 01-006-062544-000001
Actv Date: Not reported
Capacity: 10000
Tank Use: M.V. FUEL
Stg: PRODUCT
Content: REG UNLEADED
Number Of Tanks: 4

Status: Not reported
Comp Number: 62544
Number: Not reported
Board Of Equalization: 44-031913
Ref Date: Not reported
Act Date: Not reported
Created Date: Not reported
Tank Status: Not reported
Owner Tank Id: Not reported
Swrcb Tank Id: 01-006-062544-000002
Actv Date: Not reported
Capacity: 10000
Tank Use: M.V. FUEL
Stg: PRODUCT
Content: PRM UNLEADED
Number Of Tanks: Not reported

Status: Not reported
Comp Number: 62544
Number: Not reported
Board Of Equalization: 44-031913
Ref Date: Not reported
Act Date: Not reported
Created Date: Not reported
Tank Status: Not reported
Owner Tank Id: Not reported
Swrcb Tank Id: 01-006-062544-000003
Actv Date: Not reported
Capacity: 10000
Tank Use: M.V. FUEL
Stg: PRODUCT

CHEVRON (Continued) **S105030616**

Content:	PLUS UNLEADE
Number Of Tanks:	Not reported
Status:	Not reported
Comp Number:	62544
Number:	Not reported
Board Of Equalization:	44-031913
Ref Date:	Not reported
Act Date:	Not reported
Created Date:	Not reported
Tank Status:	Not reported
Owner Tank Id:	Not reported
Swrcb Tank Id:	01-006-062544-000004
Actv Date:	Not reported
Capacity:	1000
Tank Use:	OIL
Stg:	WASTE
Content:	WASTE OIL
Number Of Tanks:	Not reported

F28 **CHEVRON #9-3934** **HIST CORTESE** **S110060595**
WNW **780 MAIN** **LUST** **N/A**
1/4-1/2 **PLEASANTON, CA 94566** **Alameda County CS**
0.335 mi.
1771 ft. **Site 2 of 2 in cluster F**

Relative:
Lower

Actual:
347 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	1
Reg By:	LTNKA
Reg Id:	01-1849

LUST:

Region:	STATE
Global Id:	T0600101715
Latitude:	37.663658
Longitude:	-121.874127
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	01/02/1996
Lead Agency:	ALAMEDA COUNTY LOP
Case Worker:	SOS
Local Agency:	ALAMEDA COUNTY LOP
RB Case Number:	01-1849
LOC Case Number:	RO0000657
File Location:	Stored electronically as an E-file
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

LUST:

Global Id:	T0600101715
Contact Type:	Local Agency Caseworker
Contact Name:	SCOTT SEERY
Organization Name:	ALAMEDA COUNTY LOP
Address:	1131 HARBOR BAY PARKWAY

CHEVRON #9-3934 (Continued) **S110060595**

City: ALAMEDA
Email: Not reported
Phone Number: Not reported

Global Id: T0600101715
Contact Type: Regional Board Caseworker
Contact Name: Cherie McCaulou
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)
Address: 1515 CLAY STREET, SUITE 1400
City: OAKLAND
Email: cmccaulou@waterboards.ca.gov
Phone Number: Not reported

LUST:
Global Id: T0600101715
Action Type: REMEDIATION
Date: 01/01/1950
Action: Not reported

Global Id: T0600101715
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Alameda County CS:
Status: Case Closed
Record Id: RO0000657
Site Contact: Not reported
PE: 5602

29
NW
1/4-1/2
0.390 mi.
2061 ft.

UNOCAL SERVICE STATION #543
992 MAIN ST
PLEASANTON, CA 94566

HIST CORTESE **S101580194**
LUST **N/A**
Alameda County CS
SWEEPS UST
HAZNET

Relative:
Lower

Actual:
350 ft.

CORTESE:
Region: CORTESE
Facility County Code: 1
Reg By: LTNKA
Reg Id: 01-0054

LUST:
Region: STATE
Global Id: T0600100048
Latitude: 37.6657222
Longitude: -121.8736626
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 09/12/1997
Lead Agency: ALAMEDA COUNTY LOP
Case Worker: SOS
Local Agency: ALAMEDA COUNTY LOP
RB Case Number: 01-0054
LOC Case Number: RO0001159

UNOCAL SERVICE STATION #543 (Continued) **S101580194**

File Location: Stored electronically as an E-file
Potential Media Affect: Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern: Gasoline
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

LUST:
Global Id: T0600100048
Contact Type: Regional Board Caseworker
Contact Name: Cherie McCaulou
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)
Address: 1515 CLAY STREET, SUITE 1400
City: OAKLAND
Email: cmccaulou@waterboards.ca.gov
Phone Number: Not reported

Global Id: T0600100048
Contact Type: Local Agency Caseworker
Contact Name: SCOTT SEERY
Organization Name: ALAMEDA COUNTY LOP
Address: 1131 HARBOR BAY PARKWAY
City: ALAMEDA
Email: Not reported
Phone Number: Not reported

LUST:
Global Id: T0600100048
Action Type: REMEDIATION
Date: 01/01/1950
Action: Excavation

Global Id: T0600100048
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

LUST REG 2:
Region: 2
Facility Id: 01-0054
Facility Status: Case Closed
Case Number: 1929
How Discovered: Tank Closure
Leak Cause: Structure Failure
Leak Source: Tank
Date Leak Confirmed: 5/2/1992
Oversight Program: LUST
Prelim. Site Assesment Wokplan Submitted: 4/26/1995
Preliminary Site Assesment Began: Not reported
Pollution Characterization Began: Not reported
Pollution Remediation Plan Submitted: Not reported
Date Remediation Action Underway: Not reported
Date Post Remedial Action Monitoring Began: Not reported

Alameda County CS:

UNOCAL SERVICE STATION #543 (Continued) **S101580194**

Status: Case Closed
Record Id: RO0001159
Site Contact: Not reported
PE: 5602

SWEEPS UST:
Status: Not reported
Comp Number: 31729
Number: Not reported
Board Of Equalization: 44-000051
Ref Date: Not reported
Act Date: Not reported
Created Date: Not reported
Tank Status: Not reported
Owner Tank Id: Not reported
Swrcb Tank Id: 01-006-031729-000001
Actv Date: Not reported
Capacity: 10000
Tank Use: M.V. FUEL
Stg: PRODUCT
Content: REG UNLEADED
Number Of Tanks: 3

Status: Not reported
Comp Number: 31729
Number: Not reported
Board Of Equalization: 44-000051
Ref Date: Not reported
Act Date: Not reported
Created Date: Not reported
Tank Status: Not reported
Owner Tank Id: Not reported
Swrcb Tank Id: 01-006-031729-000002
Actv Date: Not reported
Capacity: 10000
Tank Use: M.V. FUEL
Stg: PRODUCT
Content: REG UNLEADED
Number Of Tanks: Not reported

Status: Not reported
Comp Number: 31729
Number: Not reported
Board Of Equalization: 44-000051
Ref Date: Not reported
Act Date: Not reported
Created Date: Not reported
Tank Status: Not reported
Owner Tank Id: Not reported
Swrcb Tank Id: 01-006-031729-000003
Actv Date: Not reported
Capacity: 550
Tank Use: OIL
Stg: WASTE
Content: WASTE OIL
Number Of Tanks: Not reported

UNOCAL SERVICE STATION #543 (Continued) **S101580194**

HAZNET:

Year:	1994
Gepaid:	CAD982042517
Contact:	UNION OIL COMPANY OF CALIFORNI
Telephone:	7144286560
Mailing Name:	Not reported
Mailing Address:	PO BOX 25376
Mailing City,St,Zip:	SANTA ANA, CA 927995376
Gen County:	1
TSD EPA ID:	CAT080011059
TSD County:	Los Angeles
Waste Category:	Unspecified oil-containing waste
Disposal Method:	Recycler
Tons:	.2293
Facility County:	1

30
NW
1/4-1/2
0.408 mi.
2154 ft.

MOBIL SERVICE STATION
1024 MAIN ST
PLEASANTON, CA 94566

HIST CORTESE **S101630324**
LUST **N/A**
CA FID UST
Alameda County CS
SWEEPS UST

Relative:
Lower

Actual:
353 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	1
Reg By:	LTNKA
Reg Id:	01-0986

LUST:

Region:	STATE
Global Id:	T0600100909
Latitude:	37.666034337
Longitude:	-121.87340625
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	07/14/2010
Lead Agency:	ALAMEDA COUNTY LOP
Case Worker:	JTW
Local Agency:	ALAMEDA COUNTY LOP
RB Case Number:	01-0986
LOC Case Number:	RO0002427
File Location:	Stored electronically as an E-file
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	The site is currently a vacant lot within a mixed commercial and residential area. A service station operated on the site until 1989. In 1989, a soil vapor survey was conducted as part of a property transfer. Petroleum hydrocarbons were detected in soil vapor primarily in the southwest portion of the site. In October 1989, the four USTs at the site were removed. Soil samples collected during the tank removal contained TPHg at concentrations up to 2,400 ppm. Based on the observed contamination in the tank pit, approximately 260 cubic yards of impacted soil was excavated and disposed off site. Eight soil borings (SB-1 through SB-8) were advanced at the site between December 1989 and June 1990 with three of the borings being converted to monitoring wells (MW-1 through MW-3). The highest concentrations of petroleum hydrocarbons were

MOBIL SERVICE STATION (Continued) **S101630324**

detected in soil samples collected between 25 and 45 feet bgs. A perched zone was encountered at approximately 25 feet bgs and a deeper water-bearing zone was encountered at approximately 45 feet bgs. In October 1990, five groundwater monitoring wells (MW-4 through MW-8) were installed. Petroleum hydrocarbons were detected in soil in the area of the pump islands and former fuel USTs.
Between August 14 and August 16, 1991, nine CPT borings were advanced at the site. Grab groundwater samples were collected at selected locations. In October 1991, the remaining product lines, vent lines, and pump islands were excavated. Trenching operations were conducted beneath the former pump islands. Soil samples collected during trenching operations contained TPHg at concentrations up to 4,000 ppm. Approximately 100 cubic yards of soil was excavated and replaced with clean fill in December 1991. In January 1992, two soil borings (SB14 and SB15) were advanced within the station building to assess the extent of contamination beneath the building. Monitoirng well MW-9 was also installed within the stiaton bui8lding.
Constant rate pumping tests were conducted on wells MW-1 and MW-2 in March 1992. An average hydraulic conductiviey of 1.5 feet per minute was estimated for the site. Three groundwater montiornig wells, one recovery well, and four vapor recovery wells were installed at the site in November 1993. Following the well installation, a vapor extraction test was conducted in November 1993. The estimated radius of influence varied from less than 10 feet in the vicinity of MW-2 to 41 feet in the vicinity of MW-1. Vapor extraction was considered a viable remedial alternative based on the resultsofthe vapor extraction test. In August 1994, the service station building was demolished and well MW-9 was decommissioned. In Septembver 1994, a Remedial Action Plan was submitted for the constructon of a vapor extraction and groundwater extraction system that would utilize four dual purpose vapor/groundwater extraction wells (RW1 through RW4) and five vapor extracton wells (VMW1, VMW2, VMW4, MW1, and MW2). System installation was completed in March 1995. The system operated for five years. During five years of operation, the system processed and discharged 3,854,430 gallons of groundwater and removed 27,218 pounds of hydrocarbons. The system was shut down on May 25, 2000 and was removed on Septebmer 29, 2000. On June 29 and July 2, 2009, six soil vapor monitoring probes (VP1 throguh VP6) were installed at the site. Soil samples collected at depths of 5.5 to 6 feet in the borings for the probes did not contain concentrations of TPHg, TPHd, BTEX, or fuel oxygenates above reporting limits. Soil vapor samples did not contain TPHg, BTEX, or fuel oxygenates at concentrations above reporting limits. Groundwater monitoring was conducted at the site from 1990 to 2009. Dissolved phase concentrations have generally decreased over time. During the most recent monitoring event in July 2009, TPHg and benzene were detected in one of 9 wells sampled at concentrations of 620 and 0.62

Click here to access the California GeoTracker records for this facility:

LUST:

Global Id:	T0600100909
Contact Type:	Regional Board Caseworker
Contact Name:	Cherie McCaulou
Organization Name:	SAN FRANCISCO BAY RWQCB (REGION 2)
Address:	1515 CLAY STREET, SUITE 1400
City:	OAKLAND
Email:	cmccaulou@waterboards.ca.gov

MOBIL SERVICE STATION (Continued) **S101630324**

Phone Number: Not reported

Global Id: T0600100909
Contact Type: Local Agency Caseworker
Contact Name: JERRY WICKHAM
Organization Name: ALAMEDA COUNTY LOP
Address: 1131 HARBOR BAY PARKWAY
City: ALAMEDA
Email: Not reported
Phone Number: 5105676791

LUST:

Global Id: T0600100909
Action Type: ENFORCEMENT
Date: 02/22/2010
Action: File Review - Closure

Global Id: T0600100909
Action Type: RESPONSE
Date: 03/05/2009
Action: Clean Up Fund - 5-Year Review Summary

Global Id: T0600100909
Action Type: ENFORCEMENT
Date: 04/28/2010
Action: Staff Letter - #20100428

Global Id: T0600100909
Action Type: RESPONSE
Date: 01/28/2010
Action: Sensitive Receptor Survey Report

Global Id: T0600100909
Action Type: RESPONSE
Date: 06/29/2010
Action: Well Destruction Report

Global Id: T0600100909
Action Type: ENFORCEMENT
Date: 07/24/2009
Action: Staff Letter - #20090724

Global Id: T0600100909
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0600100909
Action Type: ENFORCEMENT
Date: 07/22/1999
Action: Notice of Responsibility - #UNK

Global Id: T0600100909
Action Type: ENFORCEMENT
Date: 07/14/2010
Action: Closure/No Further Action Letter - #20100714

MOBIL SERVICE STATION (Continued) **S101630324**

Global Id: T0600100909
Action Type: REMEDIATION
Date: 01/01/1950
Action: Soil Vapor Extraction (SVE)

Global Id: T0600100909
Action Type: ENFORCEMENT
Date: 11/20/2009
Action: File Review - Closure

Global Id: T0600100909
Action Type: REMEDIATION
Date: 01/01/1950
Action: Excavation

Global Id: T0600100909
Action Type: RESPONSE
Date: 07/13/2010
Action: Clean Up Fund - 5-Year Review Summary

Global Id: T0600100909
Action Type: ENFORCEMENT
Date: 05/22/2009
Action: Staff Letter - #20090522

Global Id: T0600100909
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0600100909
Action Type: ENFORCEMENT
Date: 03/04/2009
Action: Staff Letter - #20090304

Global Id: T0600100909
Action Type: ENFORCEMENT
Date: 11/20/2009
Action: Staff Letter - #20091120

LUST REG 2:
Region: 2
Facility Id: 01-0986
Facility Status: Remedial action (cleanup) Underway
Case Number: RO0002427
How Discovered: Tank Closure
Leak Cause: Structure Failure
Leak Source: Tank
Date Leak Confirmed: Not reported
Oversight Program: LUST
Prelim. Site Assesment Wokplan Submitted: 1/15/1990
Preliminary Site Assesment Began: Not reported
Pollution Characterization Began: 6/1/1990
Pollution Remediation Plan Submitted: 9/13/1994
Date Remediation Action Underway: 6/16/1995
Date Post Remedial Action Monitoring Began: Not reported

MOBIL SERVICE STATION (Continued) **S101630324**

CA FID UST:

Facility ID:	01001107
Regulated By:	UTNKI
Regulated ID:	CAC000157
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	4158465887
Mail To:	Not reported
Mailing Address:	3800 W ALAMEDA AVE
Mailing Address 2:	Not reported
Mailing City,St,Zip:	PLEASANTON 94566
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Inactive

Alameda County CS:

Status:	Pollution Characterization
Record Id:	RO0002427
Site Contact:	Not reported
PE:	5602

Status:	Case Closed
Record Id:	RO0002427
Site Contact:	Not reported
PE:	5602

SWEEPS UST:

Status:	Not reported
Comp Number:	39533
Number:	Not reported
Board Of Equalization:	44-000400
Ref Date:	Not reported
Act Date:	Not reported
Created Date:	Not reported
Tank Status:	Not reported
Owner Tank Id:	Not reported
Swrcb Tank Id:	01-006-039533-000001
Actv Date:	Not reported
Capacity:	8000
Tank Use:	M.V. FUEL
Stg:	PRODUCT
Content:	REG UNLEADED
Number Of Tanks:	4

Status:	Not reported
Comp Number:	39533
Number:	Not reported
Board Of Equalization:	44-000400
Ref Date:	Not reported
Act Date:	Not reported
Created Date:	Not reported
Tank Status:	Not reported

MOBIL SERVICE STATION (Continued) **S101630324**

Owner Tank Id:	Not reported
Swrcb Tank Id:	01-006-039533-000002
Actv Date:	Not reported
Capacity:	6000
Tank Use:	M.V. FUEL
Stg:	PRODUCT
Content:	LEADED
Number Of Tanks:	Not reported

Status:	Not reported
Comp Number:	39533
Number:	Not reported
Board Of Equalization:	44-000400
Ref Date:	Not reported
Act Date:	Not reported
Created Date:	Not reported
Tank Status:	Not reported
Owner Tank Id:	Not reported
Swrcb Tank Id:	01-006-039533-000003
Actv Date:	Not reported
Capacity:	4000
Tank Use:	M.V. FUEL
Stg:	PRODUCT
Content:	REG UNLEADED
Number Of Tanks:	Not reported

Status:	Not reported
Comp Number:	39533
Number:	Not reported
Board Of Equalization:	44-000400
Ref Date:	Not reported
Act Date:	Not reported
Created Date:	Not reported
Tank Status:	Not reported
Owner Tank Id:	Not reported
Swrcb Tank Id:	01-006-039533-000004
Actv Date:	Not reported
Capacity:	285
Tank Use:	OIL
Stg:	WASTE
Content:	WASTE OIL
Number Of Tanks:	Not reported

31
WSW
1/4-1/2
0.483 mi.
2548 ft.

EXXON R/S #A-7003
349 MAIN ST
PLEASANTON, CA 94566

HIST CORTESE **S101580034**
LUST **N/A**
CA FID UST
Alameda County CS
SWEEPS UST

Relative:
Lower

Actual:
343 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	1
Reg By:	LTNKA
Reg Id:	01-0588

LUST:

Region:	STATE

EXXON R/S #A-7003 (Continued) **S101580034**

Global Id:	T0600100541
Latitude:	37.659357
Longitude:	-121.876875
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	10/14/2002
Lead Agency:	ALAMEDA COUNTY LOP
Case Worker:	SOS
Local Agency:	ALAMEDA COUNTY LOP
RB Case Number:	01-0588
LOC Case Number:	RO0000506
File Location:	Stored electronically as an E-file
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

LUST:

Global Id:	T0600100541
Contact Type:	Regional Board Caseworker
Contact Name:	Cherie McCaulou
Organization Name:	SAN FRANCISCO BAY RWQCB (REGION 2)
Address:	1515 CLAY STREET, SUITE 1400
City:	OAKLAND
Email:	cmccaulou@waterboards.ca.gov
Phone Number:	Not reported

Global Id:	T0600100541
Contact Type:	Local Agency Caseworker
Contact Name:	SCOTT SEERY
Organization Name:	ALAMEDA COUNTY LOP
Address:	1131 HARBOR BAY PARKWAY
City:	ALAMEDA
Email:	Not reported
Phone Number:	Not reported

LUST:

Global Id:	T0600100541
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported

Global Id:	T0600100541
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Excavation

LUST REG 2:

Region:	2
Facility Id:	01-0588
Facility Status:	Pollution Characterization
Case Number:	RO0000506
How Discovered:	Tank Closure
Leak Cause:	Structure Failure
Leak Source:	Tank

EXXON R/S #A-7003 (Continued) **S101580034**

Date Leak Confirmed: Not reported
Oversight Program: LUST
Prelim. Site Assesment Wokplan Submitted: Not reported
Preliminary Site Assesment Began: 1/13/1990
Pollution Characterization Began: 6/4/1990
Pollution Remediation Plan Submitted: Not reported
Date Remediation Action Underway: Not reported
Date Post Remedial Action Monitoring Began: Not reported

CA FID UST:
Facility ID: 01000713
Regulated By: UTNKA
Regulated ID: CAD981416
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 4158465517
Mail To: Not reported
Mailing Address: 4550 DACOMA
Mailing Address 2: Not reported
Mailing City,St,Zip: PLEASANTON 94566
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

Alameda County CS:
Status: Case Closed
Record Id: RO0000506
Site Contact: Not reported
PE: 5602

SWEEPS UST:
Status: A
Comp Number: 24091
Number: 1
Board Of Equalization: 44-000285
Ref Date: 06-16-92
Act Date: 06-16-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: 1
Swrcb Tank Id: 01-006-024091-000001
Actv Date: 06-17-92
Capacity: 12000
Tank Use: M.V. FUEL
Stg: P
Content: REG UNLEADED
Number Of Tanks: 4

Status: A
Comp Number: 24091
Number: 1
Board Of Equalization: 44-000285

EXXON R/S #A-7003 (Continued) **S101580034**

Ref Date:	06-16-92
Act Date:	06-16-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	2
Swrcb Tank Id:	01-006-024091-000002
Actv Date:	06-17-92
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	Not reported

Status:	A
Comp Number:	24091
Number:	1
Board Of Equalization:	44-000285
Ref Date:	06-16-92
Act Date:	06-16-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	3
Swrcb Tank Id:	01-006-024091-000003
Actv Date:	06-17-92
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	LEADED
Number Of Tanks:	Not reported

Status:	A
Comp Number:	24091
Number:	1
Board Of Equalization:	44-000285
Ref Date:	06-16-92
Act Date:	06-16-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	4
Swrcb Tank Id:	01-006-024091-000004
Actv Date:	06-17-92
Capacity:	1000
Tank Use:	M.V. FUEL
Stg:	P
Content:	USED OIL
Number Of Tanks:	Not reported

Count: 5 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
DUBLIN	S103576595	SANTA RITA OLD GRAYSTONE	580 SANTA RITA RD E	94566	HIST CORTESE, LUST
PLEASANTON	S108935412	SANTA RITA JAIL PROPERTY BURN PIT	N END BARNETT BLVD		SWF/LF
PLEASANTON	S105964498	DUBLIN/HACIENDA INCINERATOR ASH SI	W OF HACIENDA AND DIGITAL DR		SWF/LF
PLEASANTON	1003879385	CAMP PARKS COMMUNICATION ANNEX	ONIZUKA AIR FORCE BASE	94566	CERC-NFRAP
SAN DIMAS	S106922923	AT&T COMMUNICATIONS	213 ARROW HWY	94566	SWEEPS UST

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.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

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: 10/01/2012
Date Data Arrived at EDR: 10/11/2012
Date Made Active in Reports: 12/20/2012
Number of Days to Update: 70

Source: EPA
Telephone: N/A
Last EDR Contact: 10/11/2012
Next Scheduled EDR Contact: 01/21/2013
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 10/01/2012
Date Data Arrived at EDR: 10/11/2012
Date Made Active in Reports: 12/20/2012
Number of Days to Update: 70

Source: EPA
Telephone: N/A
Last EDR Contact: 10/11/2012
Next Scheduled EDR Contact: 01/21/2013
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by 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 received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

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: 10/01/2012	Source: EPA
Date Data Arrived at EDR: 10/11/2012	Telephone: N/A
Date Made Active in Reports: 12/20/2012	Last EDR Contact: 10/11/2012
Number of Days to Update: 70	Next Scheduled EDR Contact: 01/21/2013
	Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

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: 12/27/2011	Source: EPA
Date Data Arrived at EDR: 02/27/2012	Telephone: 703-412-9810
Date Made Active in Reports: 03/12/2012	Last EDR Contact: 11/28/2012
Number of Days to Update: 14	Next Scheduled EDR Contact: 03/11/2013
	Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 07/31/2012	Source: Environmental Protection Agency
Date Data Arrived at EDR: 10/09/2012	Telephone: 703-603-8704
Date Made Active in Reports: 12/20/2012	Last EDR Contact: 10/09/2012
Number of Days to Update: 72	Next Scheduled EDR Contact: 01/21/2013
	Data Release Frequency: Varies

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 12/28/2011	Source: EPA
Date Data Arrived at EDR: 02/27/2012	Telephone: 703-412-9810
Date Made Active in Reports: 03/12/2012	Last EDR Contact: 11/28/2012
Number of Days to Update: 14	Next Scheduled EDR Contact: 03/11/2013
	Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 08/19/2011
Date Data Arrived at EDR: 08/31/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 132

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 11/12/2012
Next Scheduled EDR Contact: 02/25/2013
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database 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). Transporters are individuals or entities that move hazardous waste from the generator offsite 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: 09/11/2012
Date Data Arrived at EDR: 10/04/2012
Date Made Active in Reports: 12/04/2012
Number of Days to Update: 61

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 11/29/2012
Next Scheduled EDR Contact: 01/14/2013
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database 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). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 09/11/2012
Date Data Arrived at EDR: 10/04/2012
Date Made Active in Reports: 12/04/2012
Number of Days to Update: 61

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 11/29/2012
Next Scheduled EDR Contact: 01/14/2013
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database 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). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 09/11/2012
Date Data Arrived at EDR: 10/04/2012
Date Made Active in Reports: 12/04/2012
Number of Days to Update: 61

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 11/29/2012
Next Scheduled EDR Contact: 01/14/2013
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database 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.

Date of Government Version: 09/11/2012
Date Data Arrived at EDR: 10/04/2012
Date Made Active in Reports: 12/04/2012
Number of Days to Update: 61

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 11/29/2012
Next Scheduled EDR Contact: 01/14/2013
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 07/18/2012
Date Data Arrived at EDR: 07/24/2012
Date Made Active in Reports: 11/05/2012
Number of Days to Update: 104

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 12/10/2012
Next Scheduled EDR Contact: 03/25/2013
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 07/18/2012
Date Data Arrived at EDR: 07/24/2012
Date Made Active in Reports: 11/05/2012
Number of Days to Update: 104

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 12/10/2012
Next Scheduled EDR Contact: 03/25/2013
Data Release Frequency: Varies

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 11/15/2012
Next Scheduled EDR Contact: 03/04/2013
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 04/02/2012
Date Data Arrived at EDR: 04/03/2012
Date Made Active in Reports: 06/14/2012
Number of Days to Update: 72

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 10/02/2012
Next Scheduled EDR Contact: 01/14/2013
Data Release Frequency: Annually

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 11/05/2012
Date Data Arrived at EDR: 11/06/2012
Date Made Active in Reports: 11/30/2012
Number of Days to Update: 24

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 12/06/2012
Next Scheduled EDR Contact: 02/18/2013
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 11/05/2012
Date Data Arrived at EDR: 11/06/2012
Date Made Active in Reports: 11/30/2012
Number of Days to Update: 24

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 12/06/2012
Next Scheduled EDR Contact: 02/18/2013
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 08/20/2012
Date Data Arrived at EDR: 08/20/2012
Date Made Active in Reports: 10/03/2012
Number of Days to Update: 44

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 11/19/2012
Next Scheduled EDR Contact: 03/04/2013
Data Release Frequency: Quarterly

WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 11/26/2012
Next Scheduled EDR Contact: 03/11/2013
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 1: Active Toxic Site Investigation

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: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST: Geotracker's Leaking Underground Fuel Tank Report

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. For more information on a particular leaking underground storage tank sites, please contact the appropriate regulatory agency.

Date of Government Version: 10/17/2012
Date Data Arrived at EDR: 10/18/2012
Date Made Active in Reports: 11/07/2012
Number of Days to Update: 20

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 12/17/2012
Next Scheduled EDR Contact: 04/01/2013
Data Release Frequency: Quarterly

LUST REG 7: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List
Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

LUST REG 3: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 9: Leaking Underground Storage Tank Report
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks

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: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Varies

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC: Statewide SLIC Cases

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 10/17/2012
Date Data Arrived at EDR: 10/18/2012
Date Made Active in Reports: 11/07/2012
Number of Days to Update: 20

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/17/2012
Next Scheduled EDR Contact: 04/01/2013
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Annually

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 09/12/2011
Date Data Arrived at EDR: 09/13/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 59

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 07/26/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 08/27/2012
Date Data Arrived at EDR: 08/28/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 49

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 07/26/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Quarterly

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 12/14/2011
Date Data Arrived at EDR: 12/15/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 26

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 07/26/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Semi-Annually

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/12/2012
Date Data Arrived at EDR: 05/09/2012
Date Made Active in Reports: 07/10/2012
Number of Days to Update: 62

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 11/01/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 08/17/2012
Date Data Arrived at EDR: 08/28/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 49

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/26/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 08/01/2012
Date Data Arrived at EDR: 08/02/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 75

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/30/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Quarterly

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 09/06/2012
Date Data Arrived at EDR: 09/07/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 07/26/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Quarterly

State and tribal registered storage tank lists

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 10/17/2012
Date Data Arrived at EDR: 10/18/2012
Date Made Active in Reports: 11/07/2012
Number of Days to Update: 20

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 12/18/2012
Next Scheduled EDR Contact: 04/01/2013
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities
Registered Aboveground Storage Tanks.

Date of Government Version: 08/01/2009
Date Data Arrived at EDR: 09/10/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 916-327-5092
Last EDR Contact: 10/22/2012
Next Scheduled EDR Contact: 01/21/2013
Data Release Frequency: Quarterly

INDIAN UST R1: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/12/2012
Date Data Arrived at EDR: 05/02/2012
Date Made Active in Reports: 07/16/2012
Number of Days to Update: 75

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 11/01/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 12/14/2011
Date Data Arrived at EDR: 12/15/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 26

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 07/26/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 08/02/2012
Date Data Arrived at EDR: 08/03/2012
Date Made Active in Reports: 11/05/2012
Number of Days to Update: 94

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 07/26/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 05/10/2011
Date Data Arrived at EDR: 05/11/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 34

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 07/26/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Semi-Annually

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 08/17/2012
Date Data Arrived at EDR: 08/28/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 49

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/26/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 08/27/2012
Date Data Arrived at EDR: 08/28/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 49

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 07/26/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 08/01/2012
Date Data Arrived at EDR: 08/02/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 75

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/26/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 09/06/2012
Date Data Arrived at EDR: 09/07/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 39

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 07/26/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Quarterly

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 10/15/2012
Next Scheduled EDR Contact: 01/28/2013
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 09/28/2012
Date Data Arrived at EDR: 10/02/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 14

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 10/02/2012
Next Scheduled EDR Contact: 01/14/2013
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties
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: 11/05/2012
Date Data Arrived at EDR: 11/06/2012
Date Made Active in Reports: 11/30/2012
Number of Days to Update: 24

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 12/06/2012
Next Scheduled EDR Contact: 02/18/2013
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 12/10/2012
Date Data Arrived at EDR: 12/11/2012
Date Made Active in Reports: 12/20/2012
Number of Days to Update: 9

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 12/11/2012
Next Scheduled EDR Contact: 04/08/2013
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 07/03/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: No Update Planned

WMUDS/SWAT: Waste Management Unit Database
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: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 11/12/2012
Next Scheduled EDR Contact: 02/25/2013
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 09/17/2012
Date Data Arrived at EDR: 09/19/2012
Date Made Active in Reports: 10/12/2012
Number of Days to Update: 23

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 12/20/2012
Next Scheduled EDR Contact: 04/01/2013
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 07/09/2012
Date Data Arrived at EDR: 07/12/2012
Date Made Active in Reports: 09/06/2012
Number of Days to Update: 56

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 12/14/2012
Next Scheduled EDR Contact: 03/04/2013
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 11/05/2012
Next Scheduled EDR Contact: 02/18/2013
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 07/11/2012
Date Data Arrived at EDR: 09/12/2012
Date Made Active in Reports: 11/05/2012
Number of Days to Update: 54

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 12/03/2012
Next Scheduled EDR Contact: 03/18/2013
Data Release Frequency: Quarterly

HIST CAL-SITES: Calsites Database

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. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

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: 11/05/2012
Date Data Arrived at EDR: 11/06/2012
Date Made Active in Reports: 11/30/2012
Number of Days to Update: 24

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 12/06/2012
Next Scheduled EDR Contact: 02/18/2013
Data Release Frequency: Quarterly

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 06/30/2012
Date Data Arrived at EDR: 09/12/2012
Date Made Active in Reports: 10/03/2012
Number of Days to Update: 21

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 10/01/2012
Next Scheduled EDR Contact: 01/14/2013
Data Release Frequency: Varies

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/01/2007
Date Data Arrived at EDR: 11/19/2008
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 131

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

Local Lists of Registered Storage Tanks

CA FID UST: Facility Inventory Database

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: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 09/23/2009
Date Data Arrived at EDR: 09/23/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 8

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 12/03/2012
Next Scheduled EDR Contact: 03/18/2013
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

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: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/16/2012
Date Data Arrived at EDR: 03/26/2012
Date Made Active in Reports: 06/14/2012
Number of Days to Update: 80

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 11/01/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Varies

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 09/18/2012
Date Data Arrived at EDR: 09/19/2012
Date Made Active in Reports: 10/03/2012
Number of Days to Update: 14

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 12/10/2012
Next Scheduled EDR Contact: 03/25/2013
Data Release Frequency: Varies

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 09/10/2012
Date Data Arrived at EDR: 09/11/2012
Date Made Active in Reports: 10/03/2012
Number of Days to Update: 22

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 12/11/2012
Next Scheduled EDR Contact: 03/25/2013
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 04/01/2012
Date Data Arrived at EDR: 04/03/2012
Date Made Active in Reports: 06/14/2012
Number of Days to Update: 72

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 10/02/2012
Next Scheduled EDR Contact: 01/14/2013
Data Release Frequency: Annually

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 03/28/2012
Date Data Arrived at EDR: 05/01/2012
Date Made Active in Reports: 05/25/2012
Number of Days to Update: 24

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 11/02/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Varies

LDS: Land Disposal Sites Listing

The Land Disposal program regulates of waste discharge to land for treatment, storage and disposal in waste management units.

Date of Government Version: 10/17/2012
Date Data Arrived at EDR: 10/18/2012
Date Made Active in Reports: 11/07/2012
Number of Days to Update: 20

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/17/2012
Next Scheduled EDR Contact: 04/01/2013
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing

The State Water Resources Control Board and nine Regional Water Quality Control Boards partner with the Department of Defense (DoD) through the Defense and State Memorandum of Agreement (DSMOA) to oversee the investigation and remediation of water quality issues at military facilities.

Date of Government Version: 10/17/2012
Date Data Arrived at EDR: 10/18/2012
Date Made Active in Reports: 11/07/2012
Number of Days to Update: 20

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/17/2012
Next Scheduled EDR Contact: 04/01/2013
Data Release Frequency: Quarterly

Other Ascertainable Records

RCRA-NonGen: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database 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). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 09/11/2012
Date Data Arrived at EDR: 10/04/2012
Date Made Active in Reports: 12/04/2012
Number of Days to Update: 61

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 11/29/2012
Next Scheduled EDR Contact: 01/14/2013
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 11/06/2012
Next Scheduled EDR Contact: 02/18/2013
Data Release Frequency: Varies

DOD: Department of Defense Sites

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: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 10/18/2012
Next Scheduled EDR Contact: 01/28/2013
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 08/12/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 112

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 12/10/2012
Next Scheduled EDR Contact: 03/25/2013
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

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: 10/01/2012
Date Data Arrived at EDR: 10/19/2012
Date Made Active in Reports: 12/20/2012
Number of Days to Update: 62

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 10/01/2012
Next Scheduled EDR Contact: 01/14/2013
Data Release Frequency: Varies

ROD: Records Of Decision

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: 02/27/2012
Date Data Arrived at EDR: 03/14/2012
Date Made Active in Reports: 06/14/2012
Number of Days to Update: 92

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 12/11/2012
Next Scheduled EDR Contact: 03/25/2013
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/07/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 146

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 11/28/2012
Next Scheduled EDR Contact: 03/11/2013
Data Release Frequency: Varies

MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/18/2011
Date Data Arrived at EDR: 09/08/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 21

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 12/05/2012
Next Scheduled EDR Contact: 03/18/2013
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System

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: 12/31/2009
Date Data Arrived at EDR: 09/01/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 131

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 11/28/2012
Next Scheduled EDR Contact: 03/11/2013
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

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: 12/31/2006
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 64

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 06/29/2012
Next Scheduled EDR Contact: 01/07/2013
Data Release Frequency: Every 4 Years

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
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.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 11/26/2012
Next Scheduled EDR Contact: 03/11/2013
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 11/26/2012
Next Scheduled EDR Contact: 03/11/2013
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems
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: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 11/01/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 07/20/2011
Date Data Arrived at EDR: 11/10/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 61

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 10/19/2012
Next Scheduled EDR Contact: 01/28/2013
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

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: 11/01/2010
Date Data Arrived at EDR: 11/10/2010
Date Made Active in Reports: 02/16/2011
Number of Days to Update: 98

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 10/19/2012
Next Scheduled EDR Contact: 01/28/2013
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

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: 06/21/2011
Date Data Arrived at EDR: 07/15/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 60

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 12/10/2012
Next Scheduled EDR Contact: 03/25/2013
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 10/02/2012
Date Data Arrived at EDR: 10/02/2012
Date Made Active in Reports: 11/05/2012
Number of Days to Update: 34

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 10/02/2012
Next Scheduled EDR Contact: 01/21/2013
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

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: 10/23/2011
Date Data Arrived at EDR: 12/13/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 79

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 12/11/2012
Next Scheduled EDR Contact: 03/25/2013
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

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: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

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: 12/31/2009
Date Data Arrived at EDR: 03/01/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 62

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 11/30/2012
Next Scheduled EDR Contact: 03/11/2013
Data Release Frequency: Biennially

CA BOND EXP. PLAN: Bond Expenditure Plan

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: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UIC: UIC Listing

A listing of underground control injection wells.

Date of Government Version: 08/14/2012
Date Data Arrived at EDR: 09/19/2012
Date Made Active in Reports: 10/03/2012
Number of Days to Update: 14

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 09/19/2012
Next Scheduled EDR Contact: 12/31/2012
Data Release Frequency: Varies

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 08/20/2012
Date Data Arrived at EDR: 08/20/2012
Date Made Active in Reports: 10/03/2012
Number of Days to Update: 44

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 11/19/2012
Next Scheduled EDR Contact: 03/04/2013
Data Release Frequency: Quarterly

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

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: 10/01/2012
Date Data Arrived at EDR: 10/02/2012
Date Made Active in Reports: 10/23/2012
Number of Days to Update: 21

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 10/02/2012
Next Scheduled EDR Contact: 01/14/2013
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

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 [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

NOTIFY 65: Proposition 65 Records

Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 10/21/1993
Date Data Arrived at EDR: 11/01/1993
Date Made Active in Reports: 11/19/1993
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 12/18/2012
Next Scheduled EDR Contact: 04/08/2013
Data Release Frequency: No Update Planned

DRYCLEANERS: Cleaner Facilities

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: 01/19/2012
Date Data Arrived at EDR: 01/19/2012
Date Made Active in Reports: 02/21/2012
Number of Days to Update: 33

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 12/10/2012
Next Scheduled EDR Contact: 12/24/2012
Data Release Frequency: Annually

WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 10/01/2012
Next Scheduled EDR Contact: 01/14/2013
Data Release Frequency: Varies

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 08/15/2011
Date Data Arrived at EDR: 08/23/2011
Date Made Active in Reports: 10/03/2011
Number of Days to Update: 41

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 11/15/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

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: 12/31/2011
Date Data Arrived at EDR: 06/22/2012
Date Made Active in Reports: 07/06/2012
Number of Days to Update: 14

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 10/15/2012
Next Scheduled EDR Contact: 01/28/2013
Data Release Frequency: Annually

EMI: Emissions Inventory Data
Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 10/18/2010
Number of Days to Update: 19

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 09/28/2012
Next Scheduled EDR Contact: 01/07/2013
Data Release Frequency: Varies

INDIAN RESERV: Indian Reservations
This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 10/18/2012
Next Scheduled EDR Contact: 01/28/2013
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing
The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011
Date Data Arrived at EDR: 03/09/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 10/22/2012
Next Scheduled EDR Contact: 02/04/2013
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 08/17/2010
Date Data Arrived at EDR: 01/03/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 77

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 12/11/2012
Next Scheduled EDR Contact: 03/25/2013
Data Release Frequency: Varies

HWT: Registered Hazardous Waste Transporter Database
A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 10/15/2012
Date Data Arrived at EDR: 10/16/2012
Date Made Active in Reports: 11/07/2012
Number of Days to Update: 22

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 10/16/2012
Next Scheduled EDR Contact: 01/28/2013
Data Release Frequency: Quarterly

HWP: EnviroStor Permitted Facilities Listing
Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 08/28/2012
Date Data Arrived at EDR: 08/28/2012
Date Made Active in Reports: 10/03/2012
Number of Days to Update: 36

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 11/28/2012
Next Scheduled EDR Contact: 03/11/2013
Data Release Frequency: Quarterly

FINANCIAL ASSURANCE 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 08/14/2012
Date Data Arrived at EDR: 08/20/2012
Date Made Active in Reports: 10/03/2012
Number of Days to Update: 44

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 11/16/2012
Next Scheduled EDR Contact: 03/04/2013
Data Release Frequency: Varies

FINANCIAL ASSURANCE 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 03/01/2007
Date Data Arrived at EDR: 06/01/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 28

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 11/02/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Varies

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 11/11/2011
Date Data Arrived at EDR: 05/18/2012
Date Made Active in Reports: 05/25/2012
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 08/16/2012
Next Scheduled EDR Contact: 11/26/2012
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 10/18/2012
Next Scheduled EDR Contact: 01/28/2013
Data Release Frequency: N/A

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/01/2012
Date Data Arrived at EDR: 10/04/2012
Date Made Active in Reports: 11/05/2012
Number of Days to Update: 32

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 10/04/2012
Next Scheduled EDR Contact: 01/14/2013
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/13/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 11/12/2012
Next Scheduled EDR Contact: 02/25/2013
Data Release Frequency: Quarterly

US FIN ASSUR: Financial Assurance Information
All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 08/20/2012
Date Data Arrived at EDR: 08/28/2012
Date Made Active in Reports: 11/05/2012
Number of Days to Update: 69

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 11/16/2012
Next Scheduled EDR Contact: 03/04/2013
Data Release Frequency: Quarterly

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011
Date Data Arrived at EDR: 10/19/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 11/02/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Varies

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 09/17/2012
Date Data Arrived at EDR: 09/19/2012
Date Made Active in Reports: 10/03/2012
Number of Days to Update: 14

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 12/20/2012
Next Scheduled EDR Contact: 04/01/2013
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing
The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 09/06/2012
Date Data Arrived at EDR: 09/12/2012
Date Made Active in Reports: 10/03/2012
Number of Days to Update: 21

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 12/10/2012
Next Scheduled EDR Contact: 03/25/2013
Data Release Frequency: Varies

COAL ASH DOE: Sleam-Electric Plan Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 10/16/2012
Next Scheduled EDR Contact: 01/28/2013
Data Release Frequency: Varies

EDR PROPRIETARY RECORDS

EDR Proprietary Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR US Hist Auto Stat: EDR Proprietary Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential 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 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, etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR US Hist Cleaners: EDR Proprietary Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner 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 establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 10/09/2012
Date Data Arrived at EDR: 10/12/2012
Date Made Active in Reports: 11/07/2012
Number of Days to Update: 26

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 06/27/2012
Next Scheduled EDR Contact: 10/15/2012
Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 10/09/2012
Date Data Arrived at EDR: 10/12/2012
Date Made Active in Reports: 10/24/2012
Number of Days to Update: 12

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 06/27/2012
Next Scheduled EDR Contact: 10/15/2012
Data Release Frequency: Semi-Annually

BUTTE COUNTY:

CUPA Facility Listing
Cupa facility list.

Date of Government Version: 10/16/2012
Date Data Arrived at EDR: 10/17/2012
Date Made Active in Reports: 11/13/2012
Number of Days to Update: 27

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 10/15/2012
Next Scheduled EDR Contact: 01/28/2013
Data Release Frequency: Varies

COLUSA COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 08/16/2012
Date Data Arrived at EDR: 08/22/2012
Date Made Active in Reports: 10/03/2012
Number of Days to Update: 42

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 12/14/2012
Next Scheduled EDR Contact: 02/25/2013
Data Release Frequency: Varies

CONTRA COSTA COUNTY:

Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 10/10/2012
Date Data Arrived at EDR: 10/11/2012
Date Made Active in Reports: 11/07/2012
Number of Days to Update: 27

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 11/05/2012
Next Scheduled EDR Contact: 02/18/2013
Data Release Frequency: Semi-Annually

EL DORADO COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 08/20/2012
Date Data Arrived at EDR: 08/22/2012
Date Made Active in Reports: 10/03/2012
Number of Days to Update: 42

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 11/05/2012
Next Scheduled EDR Contact: 02/18/2013
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA Resources List
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: 09/30/2012
Date Data Arrived at EDR: 10/05/2012
Date Made Active in Reports: 10/23/2012
Number of Days to Update: 18

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 10/28/2012
Next Scheduled EDR Contact: 01/28/2013
Data Release Frequency: Semi-Annually

HUMBOLDT COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 09/10/2012
Date Data Arrived at EDR: 09/11/2012
Date Made Active in Reports: 10/03/2012
Number of Days to Update: 22

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 11/26/2012
Next Scheduled EDR Contact: 03/11/2013
Data Release Frequency: Varies

IMPERIAL COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 05/01/2012
Date Data Arrived at EDR: 05/02/2012
Date Made Active in Reports: 06/11/2012
Number of Days to Update: 40

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 10/04/2012
Next Scheduled EDR Contact: 11/12/2012
Data Release Frequency: Varies

INYO COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 06/26/2012
Date Data Arrived at EDR: 06/27/2012
Date Made Active in Reports: 08/17/2012
Number of Days to Update: 51

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 11/26/2012
Next Scheduled EDR Contact: 03/11/2013
Data Release Frequency: Varies

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 08/31/2010
Date Data Arrived at EDR: 09/01/2010
Date Made Active in Reports: 09/30/2010
Number of Days to Update: 29

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 11/12/2012
Next Scheduled EDR Contact: 02/25/2013
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA Facility List
A listing of sites included in the county?s Certified Unified Program Agency database. California?s Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 07/10/2012
Date Data Arrived at EDR: 07/12/2012
Date Made Active in Reports: 09/06/2012
Number of Days to Update: 56

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 12/10/2012
Next Scheduled EDR Contact: 03/11/2013
Data Release Frequency: Varies

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 12/18/2012
Next Scheduled EDR Contact: 04/01/2013
Data Release Frequency: No Update Planned

HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 06/28/2012
Date Data Arrived at EDR: 09/25/2012
Date Made Active in Reports: 10/23/2012
Number of Days to Update: 28

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 07/16/2012
Next Scheduled EDR Contact: 10/26/2012
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 10/22/2012
Date Data Arrived at EDR: 10/23/2012
Date Made Active in Reports: 11/30/2012
Number of Days to Update: 38

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 10/23/2012
Next Scheduled EDR Contact: 02/04/2013
Data Release Frequency: Varies

City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 03/05/2009
Date Data Arrived at EDR: 03/10/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 29

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 11/16/2012
Next Scheduled EDR Contact: 03/04/2013
Data Release Frequency: Varies

Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 12/29/2011
Date Data Arrived at EDR: 02/02/2012
Date Made Active in Reports: 02/21/2012
Number of Days to Update: 19

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 10/22/2012
Next Scheduled EDR Contact: 02/04/2013
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 10/23/2012
Date Data Arrived at EDR: 10/25/2012
Date Made Active in Reports: 11/30/2012
Number of Days to Update: 36

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 10/22/2012
Next Scheduled EDR Contact: 02/04/2013
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 03/28/2003
Date Data Arrived at EDR: 10/23/2003
Date Made Active in Reports: 11/26/2003
Number of Days to Update: 34

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 11/01/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Annually

City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 10/15/2012
Date Data Arrived at EDR: 10/19/2012
Date Made Active in Reports: 11/07/2012
Number of Days to Update: 19

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 10/15/2012
Next Scheduled EDR Contact: 01/28/2013
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA Facility List
A listing of sites included in the county?s Certified Unified Program Agency database. California?s Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 09/17/2012
Date Data Arrived at EDR: 09/18/2012
Date Made Active in Reports: 10/03/2012
Number of Days to Update: 15

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 11/26/2012
Next Scheduled EDR Contact: 03/11/2013
Data Release Frequency: Varies

MARIN COUNTY:

Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 07/24/2012
Date Data Arrived at EDR: 07/31/2012
Date Made Active in Reports: 09/14/2012
Number of Days to Update: 45

Source: Public Works Department Waste Management
Telephone: 415-499-6647
Last EDR Contact: 11/09/2012
Next Scheduled EDR Contact: 01/21/2013
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 09/18/2012
Date Data Arrived at EDR: 09/19/2012
Date Made Active in Reports: 10/03/2012
Number of Days to Update: 14

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 12/18/2012
Next Scheduled EDR Contact: 03/11/2013
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 09/18/2012
Date Data Arrived at EDR: 09/18/2012
Date Made Active in Reports: 10/03/2012
Number of Days to Update: 15

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 11/26/2012
Next Scheduled EDR Contact: 03/11/2013
Data Release Frequency: Varies

NAPA COUNTY:

Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 12/05/2011
Date Data Arrived at EDR: 12/06/2011
Date Made Active in Reports: 02/07/2012
Number of Days to Update: 63

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 12/03/2012
Next Scheduled EDR Contact: 03/18/2013
Data Release Frequency: No Update Planned

Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 01/15/2008
Date Data Arrived at EDR: 01/16/2008
Date Made Active in Reports: 02/08/2008
Number of Days to Update: 23

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 12/05/2012
Next Scheduled EDR Contact: 03/18/2013
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 11/05/2012
Date Data Arrived at EDR: 11/06/2012
Date Made Active in Reports: 11/30/2012
Number of Days to Update: 24

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 11/05/2012
Next Scheduled EDR Contact: 02/18/2013
Data Release Frequency: Varies

ORANGE COUNTY:

List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 11/05/2012
Date Data Arrived at EDR: 11/16/2012
Date Made Active in Reports: 12/03/2012
Number of Days to Update: 17

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/12/2012
Next Scheduled EDR Contact: 02/25/2013
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 11/05/2012
Date Data Arrived at EDR: 11/16/2012
Date Made Active in Reports: 12/03/2012
Number of Days to Update: 17

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/05/2012
Next Scheduled EDR Contact: 02/25/2013
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 11/05/2012
Date Data Arrived at EDR: 11/15/2012
Date Made Active in Reports: 12/03/2012
Number of Days to Update: 18

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/12/2012
Next Scheduled EDR Contact: 02/25/2013
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 09/05/2012
Date Data Arrived at EDR: 09/11/2012
Date Made Active in Reports: 10/03/2012
Number of Days to Update: 22

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 12/10/2012
Next Scheduled EDR Contact: 03/25/2013
Data Release Frequency: Semi-Annually

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 10/16/2012
Date Data Arrived at EDR: 10/18/2012
Date Made Active in Reports: 11/07/2012
Number of Days to Update: 20

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/24/2012
Next Scheduled EDR Contact: 01/07/2013
Data Release Frequency: Quarterly

Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 10/16/2012
Date Data Arrived at EDR: 10/18/2012
Date Made Active in Reports: 11/07/2012
Number of Days to Update: 20

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/24/2012
Next Scheduled EDR Contact: 01/07/2013
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 08/01/2012
Date Data Arrived at EDR: 10/11/2012
Date Made Active in Reports: 11/02/2012
Number of Days to Update: 22

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/09/2012
Next Scheduled EDR Contact: 01/21/2013
Data Release Frequency: Quarterly

Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 08/08/2012
Date Data Arrived at EDR: 10/11/2012
Date Made Active in Reports: 11/13/2012
Number of Days to Update: 33

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/09/2012
Next Scheduled EDR Contact: 01/21/2013
Data Release Frequency: Quarterly

SAN BERNARDINO COUNTY:

Hazardous Material Permits
This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 08/29/2012
Date Data Arrived at EDR: 08/30/2012
Date Made Active in Reports: 10/03/2012
Number of Days to Update: 34

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 11/12/2012
Next Scheduled EDR Contact: 02/25/2013
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Hazardous Materials Management Division Database

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: 08/17/2012
Date Data Arrived at EDR: 08/20/2012
Date Made Active in Reports: 10/03/2012
Number of Days to Update: 44

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 12/10/2012
Next Scheduled EDR Contact: 03/25/2013
Data Release Frequency: Quarterly

Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/31/2012
Date Data Arrived at EDR: 11/06/2012
Date Made Active in Reports: 11/30/2012
Number of Days to Update: 24

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 07/26/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Varies

Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 12/10/2012
Next Scheduled EDR Contact: 03/25/2013
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

Local Oversite Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 11/12/2012
Next Scheduled EDR Contact: 02/25/2013
Data Release Frequency: Quarterly

Underground Storage Tank Information

Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/29/2010
Date Data Arrived at EDR: 03/10/2011
Date Made Active in Reports: 03/15/2011
Number of Days to Update: 5

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 11/12/2012
Next Scheduled EDR Contact: 02/25/2013
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 09/24/2012
Date Data Arrived at EDR: 09/25/2012
Date Made Active in Reports: 10/23/2012
Number of Days to Update: 28

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 12/18/2012
Next Scheduled EDR Contact: 04/08/2013
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 09/24/2012
Date Data Arrived at EDR: 09/25/2012
Date Made Active in Reports: 11/02/2012
Number of Days to Update: 38

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 11/26/2012
Next Scheduled EDR Contact: 03/11/2013
Data Release Frequency: Varies

SAN MATEO COUNTY:

Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 10/17/2012
Date Data Arrived at EDR: 10/19/2012
Date Made Active in Reports: 11/13/2012
Number of Days to Update: 25

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 12/12/2012
Next Scheduled EDR Contact: 04/01/2013
Data Release Frequency: Annually

Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 09/13/2012
Date Data Arrived at EDR: 09/18/2012
Date Made Active in Reports: 10/03/2012
Number of Days to Update: 15

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 12/12/2012
Next Scheduled EDR Contact: 04/01/2013
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 12/10/2012
Next Scheduled EDR Contact: 03/11/2013
Data Release Frequency: Varies

SANTA CLARA COUNTY:

HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LOP Listing

A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 09/04/2012
Date Data Arrived at EDR: 09/06/2012
Date Made Active in Reports: 10/03/2012
Number of Days to Update: 27

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 12/03/2012
Next Scheduled EDR Contact: 03/18/2013
Data Release Frequency: Annually

Hazardous Material Facilities

Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 11/13/2012
Date Data Arrived at EDR: 11/14/2012
Date Made Active in Reports: 12/03/2012
Number of Days to Update: 19

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 11/12/2012
Next Scheduled EDR Contact: 02/25/2013
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA Facility List

CUPA facility listing.

Date of Government Version: 08/23/2012
Date Data Arrived at EDR: 08/28/2012
Date Made Active in Reports: 10/03/2012
Number of Days to Update: 36

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 11/26/2012
Next Scheduled EDR Contact: 03/11/2013
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA Facility List

Cupa Facility List.

Date of Government Version: 08/22/2012
Date Data Arrived at EDR: 08/28/2012
Date Made Active in Reports: 10/03/2012
Number of Days to Update: 36

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 11/26/2012
Next Scheduled EDR Contact: 03/11/2013
Data Release Frequency: Varies

SOLANO COUNTY:

Leaking Underground Storage Tanks

A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 09/14/2012
Date Data Arrived at EDR: 10/05/2012
Date Made Active in Reports: 10/23/2012
Number of Days to Update: 18

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 12/12/2012
Next Scheduled EDR Contact: 04/01/2013
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 09/14/2012
Date Data Arrived at EDR: 10/09/2012
Date Made Active in Reports: 10/23/2012
Number of Days to Update: 14

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 12/12/2012
Next Scheduled EDR Contact: 04/01/2013
Data Release Frequency: Quarterly

SONOMA COUNTY:

Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 10/02/2012
Date Data Arrived at EDR: 10/03/2012
Date Made Active in Reports: 10/23/2012
Number of Days to Update: 20

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 10/01/2012
Next Scheduled EDR Contact: 01/14/2013
Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 09/06/2012
Date Data Arrived at EDR: 09/11/2012
Date Made Active in Reports: 10/03/2012
Number of Days to Update: 22

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 12/10/2012
Next Scheduled EDR Contact: 03/25/2013
Data Release Frequency: Semi-Annually

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
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: 03/30/2012
Date Data Arrived at EDR: 05/25/2012
Date Made Active in Reports: 07/06/2012
Number of Days to Update: 42

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 11/21/2012
Next Scheduled EDR Contact: 03/04/2013
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 10/04/2012
Next Scheduled EDR Contact: 01/21/2013
Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 11/15/2012
Next Scheduled EDR Contact: 03/04/2013
Data Release Frequency: Quarterly

Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 10/29/2012
Date Data Arrived at EDR: 11/06/2012
Date Made Active in Reports: 12/03/2012
Number of Days to Update: 27

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 11/01/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Quarterly

Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 08/27/2012
Date Data Arrived at EDR: 09/20/2012
Date Made Active in Reports: 10/23/2012
Number of Days to Update: 33

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 12/17/2012
Next Scheduled EDR Contact: 04/01/2013
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 10/02/2012
Date Data Arrived at EDR: 10/04/2012
Date Made Active in Reports: 10/23/2012
Number of Days to Update: 19

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 12/18/2012
Next Scheduled EDR Contact: 04/08/2013
Data Release Frequency: Annually

YUBA COUNTY:

CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 08/16/2012
Date Data Arrived at EDR: 08/16/2012
Date Made Active in Reports: 10/03/2012
Number of Days to Update: 48

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 11/05/2012
Next Scheduled EDR Contact: 02/18/2013
Data Release Frequency: Varies

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.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 08/20/2012
Date Data Arrived at EDR: 08/20/2012
Date Made Active in Reports: 09/20/2012
Number of Days to Update: 31

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 11/19/2012
Next Scheduled EDR Contact: 03/04/2013
Data Release Frequency: Annually

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 07/19/2012
Date Made Active in Reports: 08/28/2012
Number of Days to Update: 40

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 10/16/2012
Next Scheduled EDR Contact: 01/28/2013
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 11/01/2012
Date Data Arrived at EDR: 11/07/2012
Date Made Active in Reports: 12/11/2012
Number of Days to Update: 34

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 11/07/2012
Next Scheduled EDR Contact: 02/18/2013
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 07/23/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 57

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 10/22/2012
Next Scheduled EDR Contact: 02/04/2013
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 06/22/2012
Date Made Active in Reports: 07/31/2012
Number of Days to Update: 39

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 11/26/2012
Next Scheduled EDR Contact: 03/11/2013
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 07/19/2012
Date Made Active in Reports: 09/27/2012
Number of Days to Update: 70

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 12/13/2012
Next Scheduled EDR Contact: 04/01/2013
Data Release Frequency: Annually

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: Rextag Strategies Corp.
Telephone: (281) 769-2247
U.S. Electric Transmission and Power Plants Systems Digital GIS Data

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.

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 2003 & 2011 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 and 2005 from the U.S. Fish and Wildlife Service.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

STREET AND ADDRESS INFORMATION

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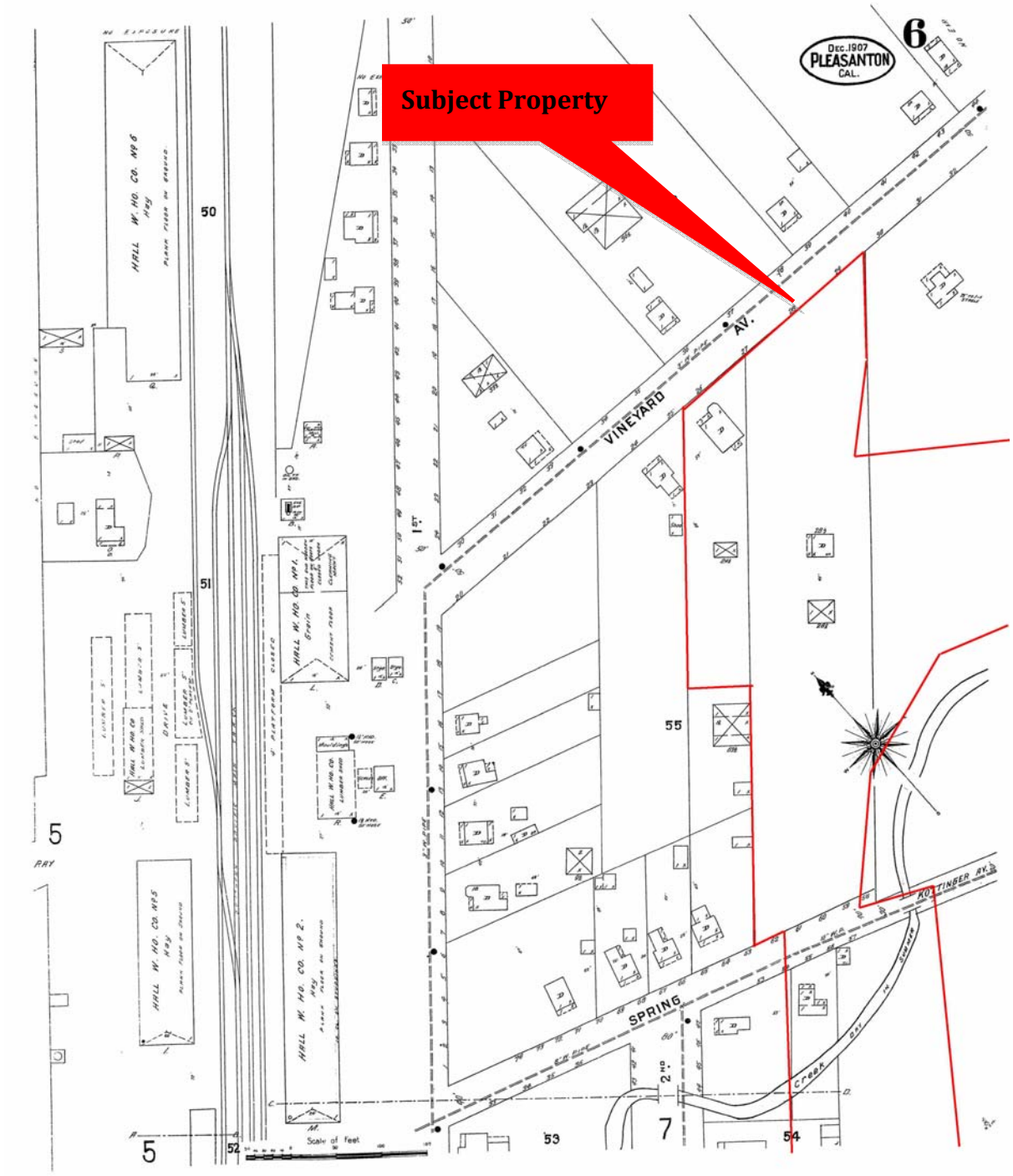
APPENDIX C

HISTORICAL SOURCES



SANBORN INSURANCE MAPS

240 & 251 Kottinger Drive 4138 Vineyard Avenue & 4153 Regalia Court,
Pleasanton, California, 94566

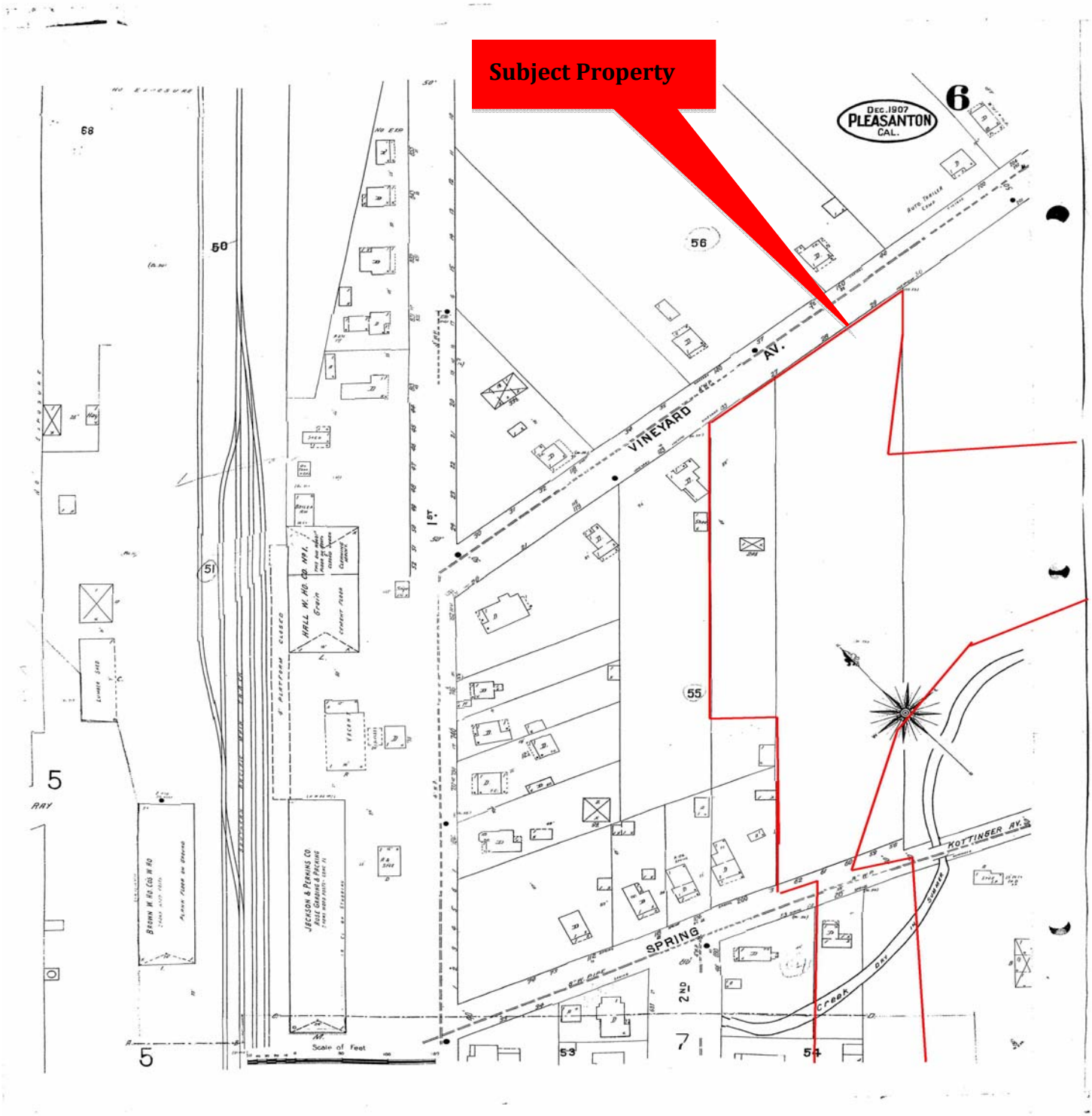
N

Approximate Property Boundary

Year: 1907

Project Number: 315504

AEI Consultants



SANBORN INSURANCE MAPS

240 & 251 Kottinger Drive 4138 Vineyard Avenue & 4153 Regalia Court,
Pleasanton, California, 94566

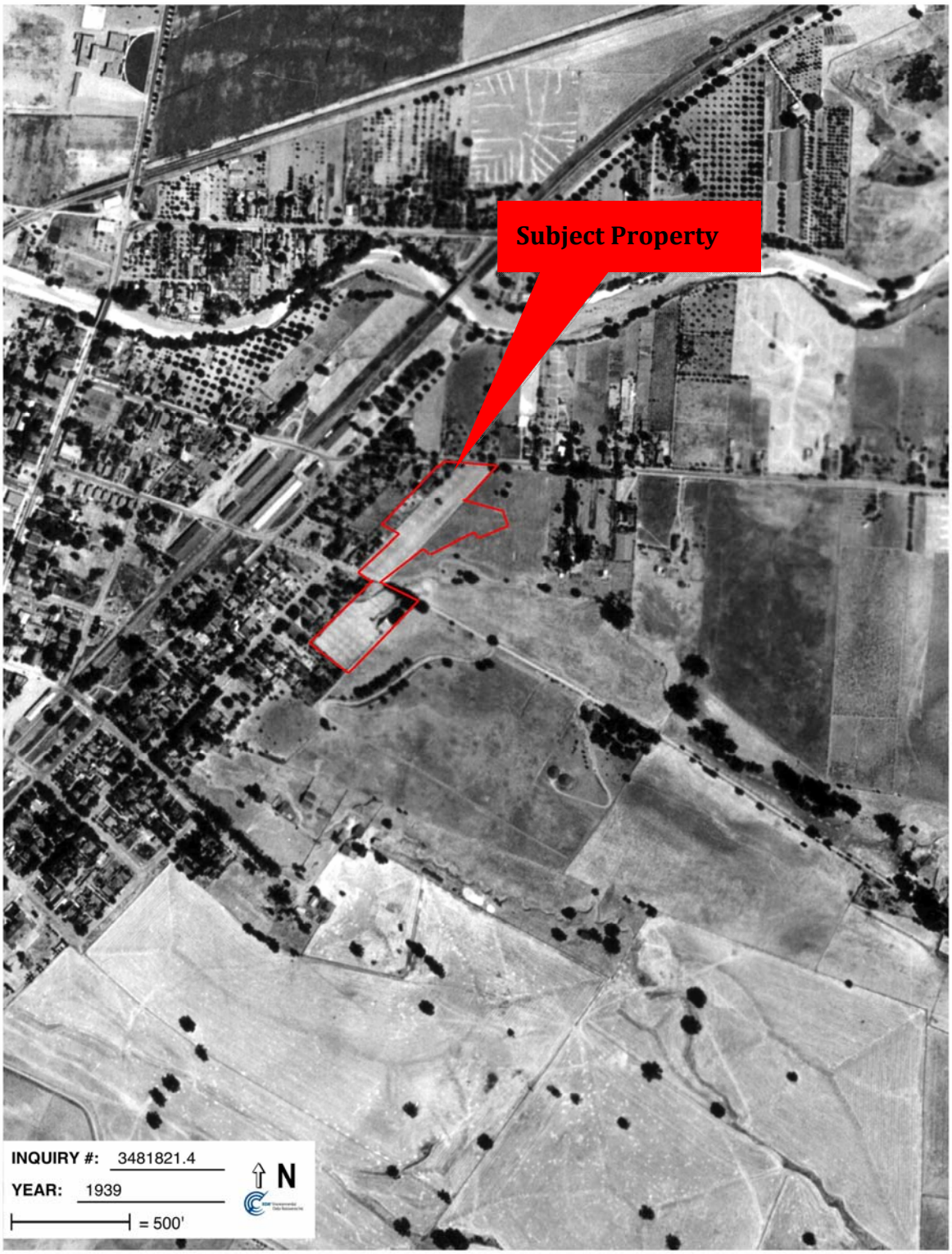
N

Approximate Property Boundary

Year: 1943

Project Number: 315504

AEI Consultants



AERIAL PHOTOGRAPH

240 & 251 Kottinger Drive, 4138 Vineyard Avenue & 4153 Regalia Court,
Pleasanton, California, 94566

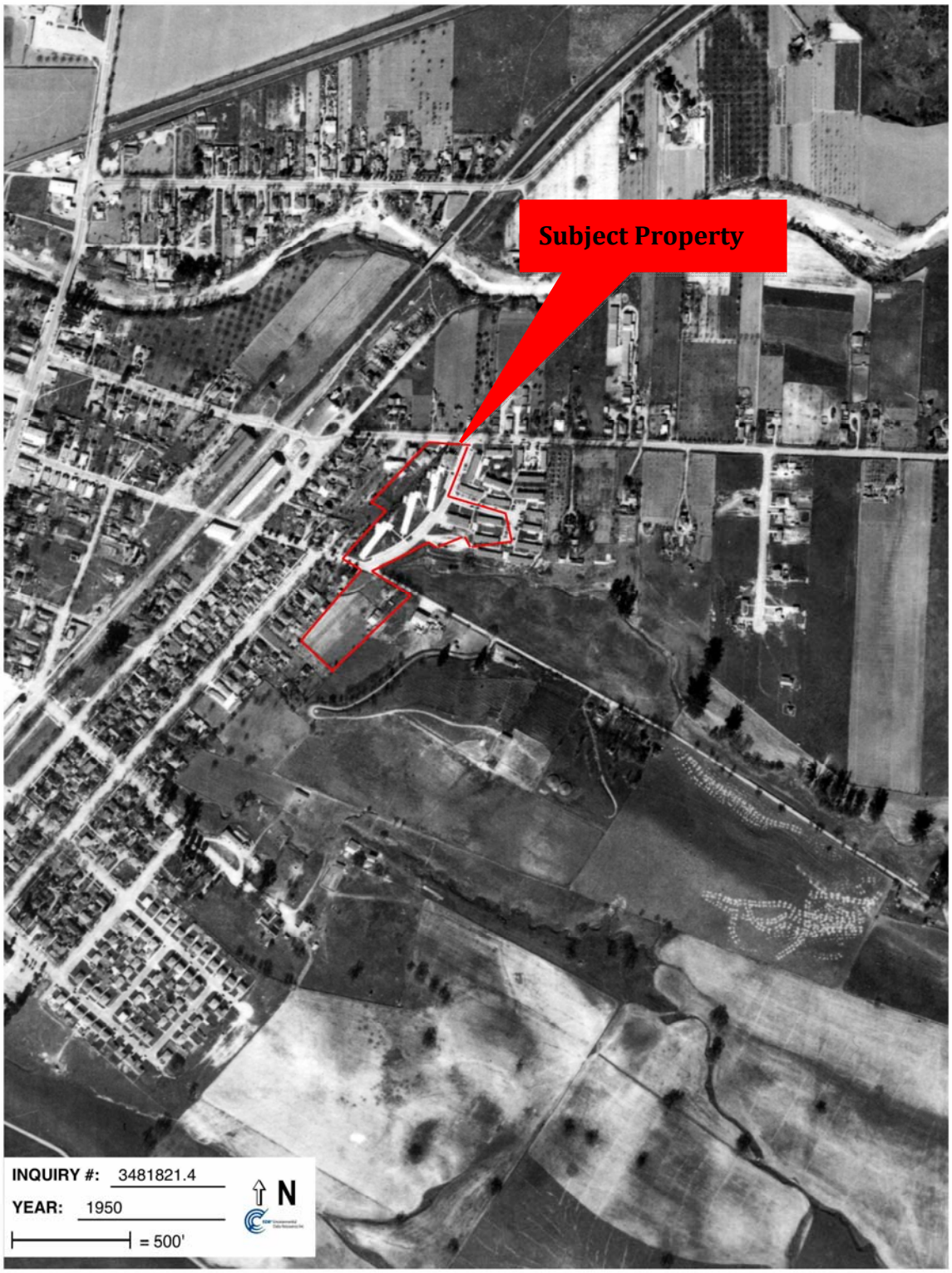
N

Approximate Property Boundary

Year: 1939

Project Number: 315504

AEI Consultants



AERIAL PHOTOGRAPH

240 & 251 Kottinger Drive, 4138 Vineyard Avenue & 4153 Regalia Court,
Pleasanton, California, 94566

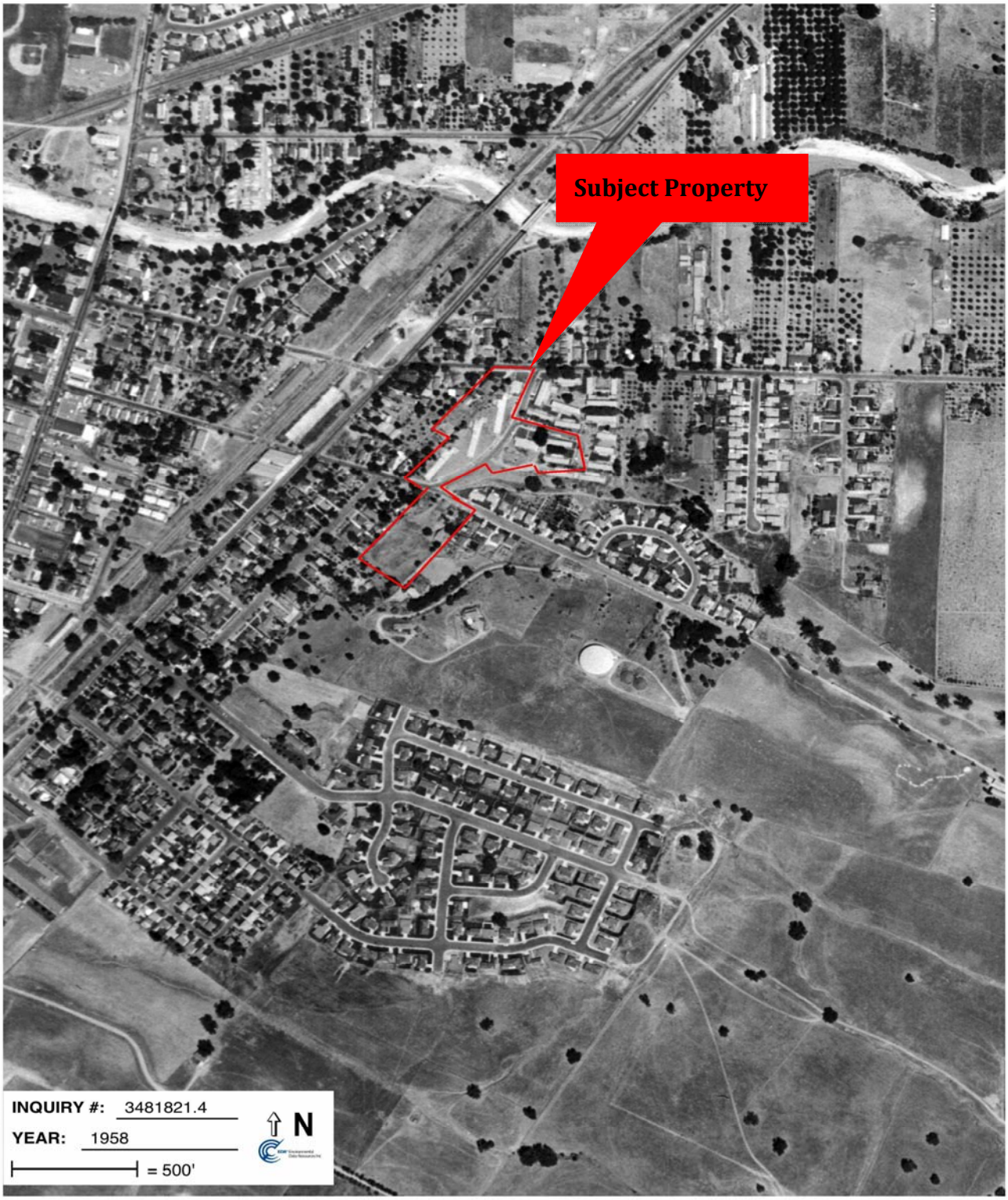
N

Approximate Property Boundary

Year: 1950

Project Number: 315504

AEI Consultants



AERIAL PHOTOGRAPH

240 & 251 Kottinger Drive, 4138 Vineyard Avenue & 4153 Regalia Court,
Pleasanton, California, 94566

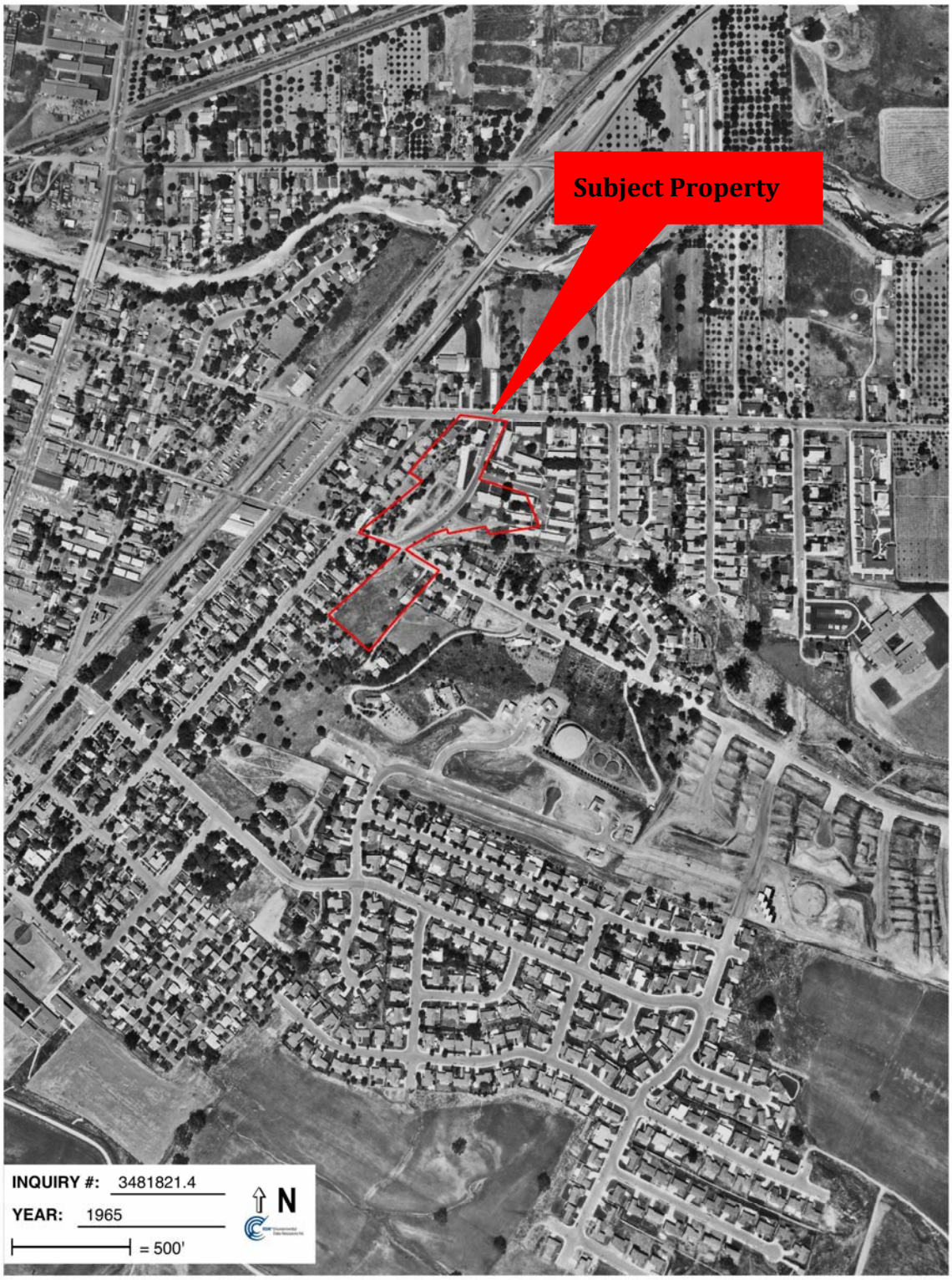
N

Approximate Property Boundary

Year: 1958

Project Number: 315504

AEI Consultants



AERIAL PHOTOGRAPH

240 & 251 Kottinger Drive, 4138 Vineyard Avenue & 4153 Regalia Court,
Pleasanton, California, 94566

N

Approximate Property Boundary

Year: 1965

Project Number: 315504

AEI Consultants

AERIAL PHOTOGRAPH

240 & 251 Kottinger Drive, 4138 Vineyard Avenue & 4153 Regalia Court,
Pleasanton, California, 94566

N

Approximate Property Boundary

Year: 1974

Project Number: 315504

AEI Consultants

AERIAL PHOTOGRAPH

240 & 251 Kottinger Drive, 4138 Vineyard Avenue & 4153 Regalia Court,
Pleasanton, California, 94566

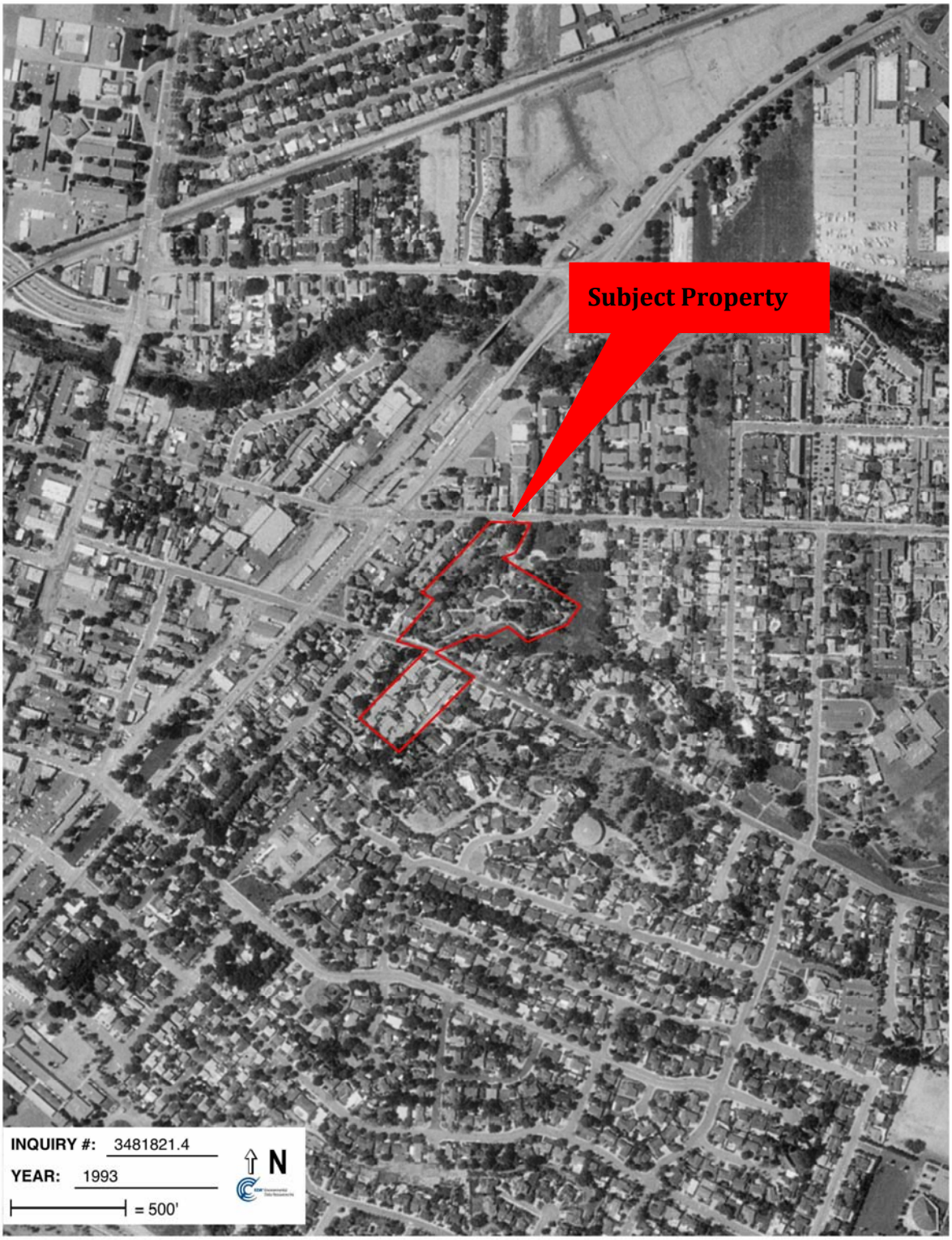
N

Approximate Property Boundary

Year: 1982

Project Number: 315504

AEI Consultants



AERIAL PHOTOGRAPH

240 & 251 Kottinger Drive, 4138 Vineyard Avenue & 4153 Regalia Court,
Pleasanton, California, 94566

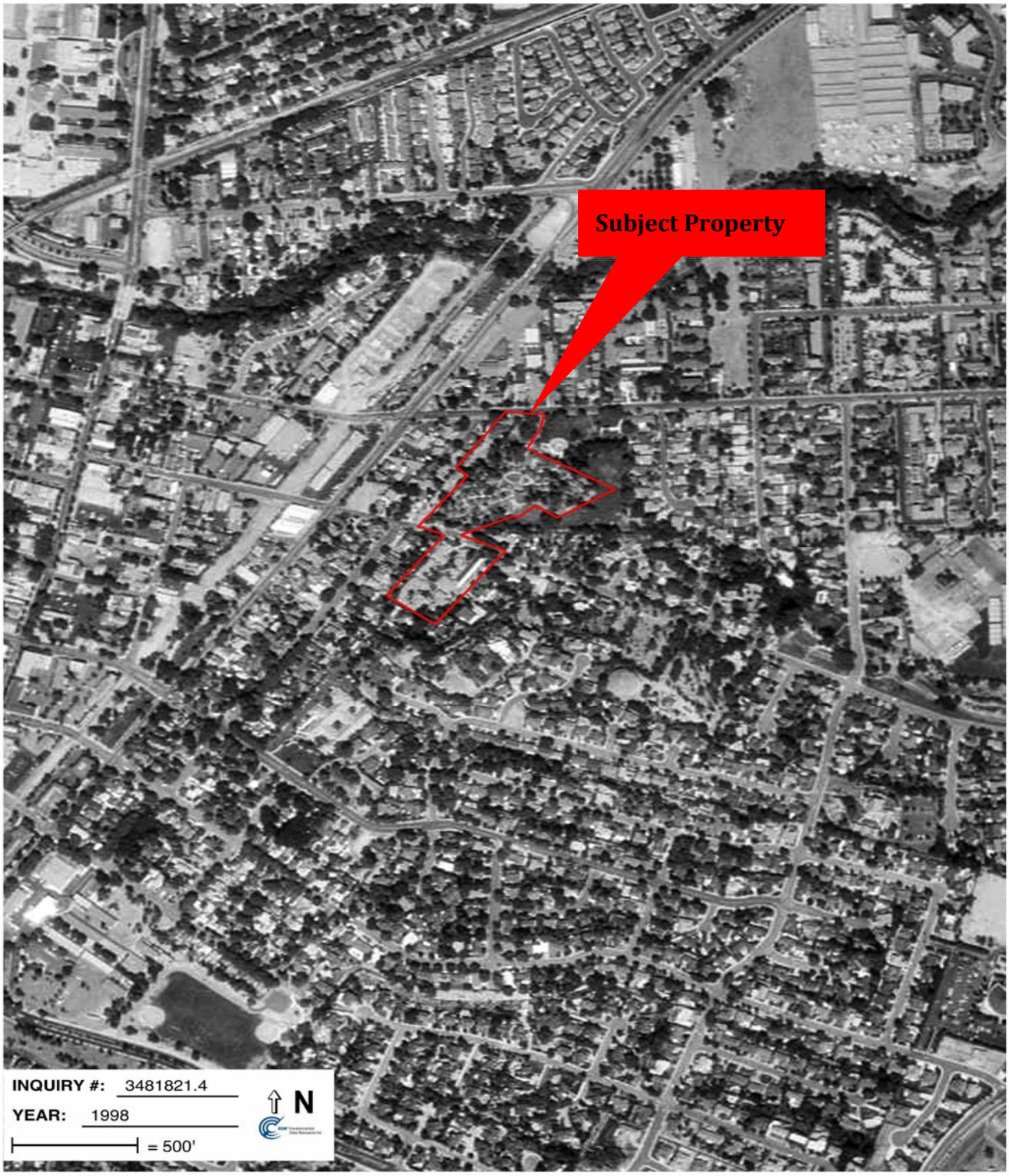
N

Approximate Property Boundary

Year: 1993

Project Number: 315504

AEI Consultants



AERIAL PHOTOGRAPH

240 & 251 Kottinger Drive, 4138 Vineyard Avenue & 4153 Regalia Court,
Pleasanton, California, 94566

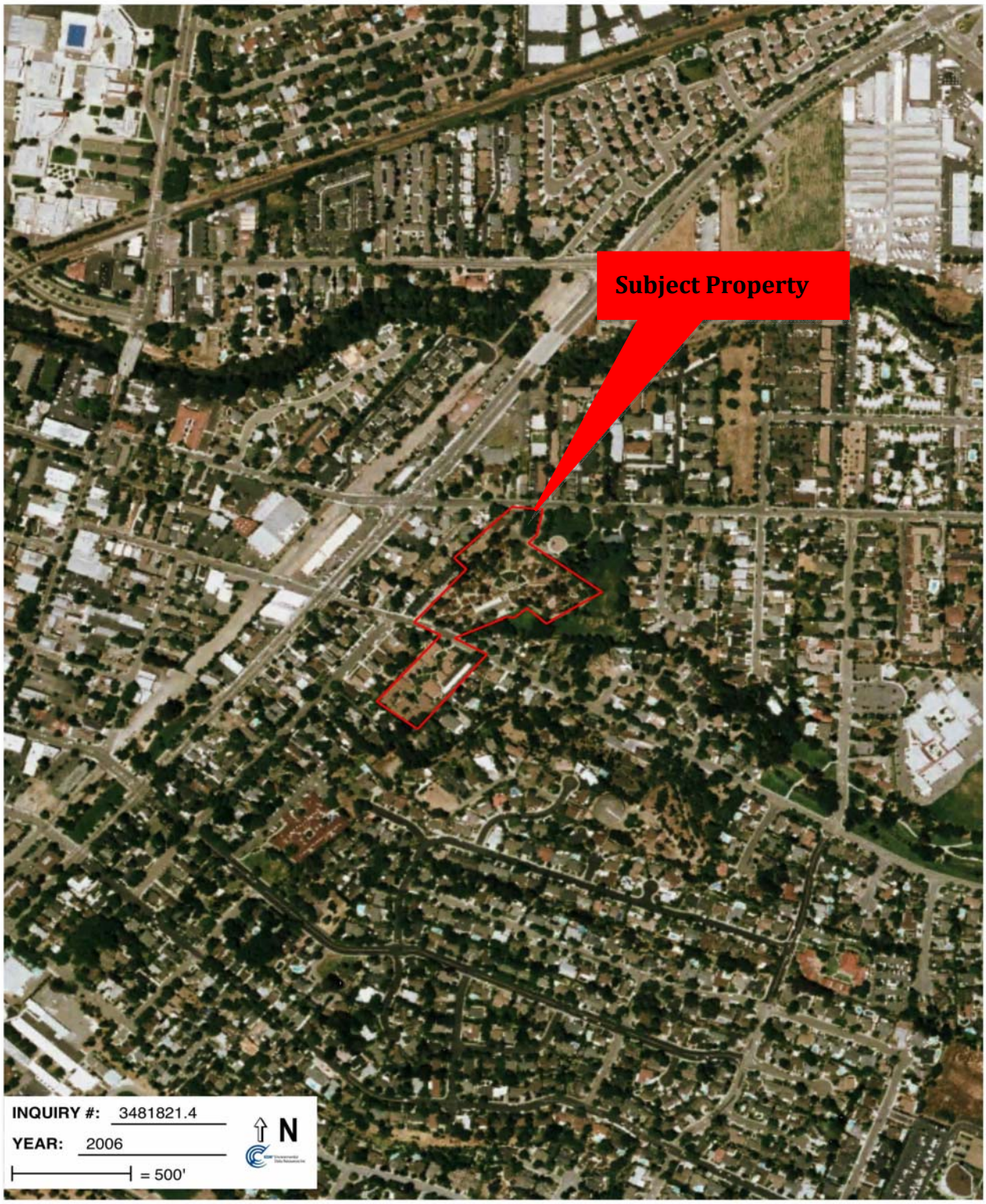
N

Approximate Property Boundary

Year: 1998

Project Number: 315504

AEI Consultants



AERIAL PHOTOGRAPH

240 & 251 Kottinger Drive, 4138 Vineyard Avenue & 4153 Regalia Court,
Pleasanton, California, 94566

N

Approximate Property Boundary

Year: 2006

Project Number: 315504

AEI Consultants

APPENDIX D

REGULATORY AGENCY RECORDS

ASSESSOR'S MAP 94

Code Area Nos. 19-029

19

Scale: 1" = 100'

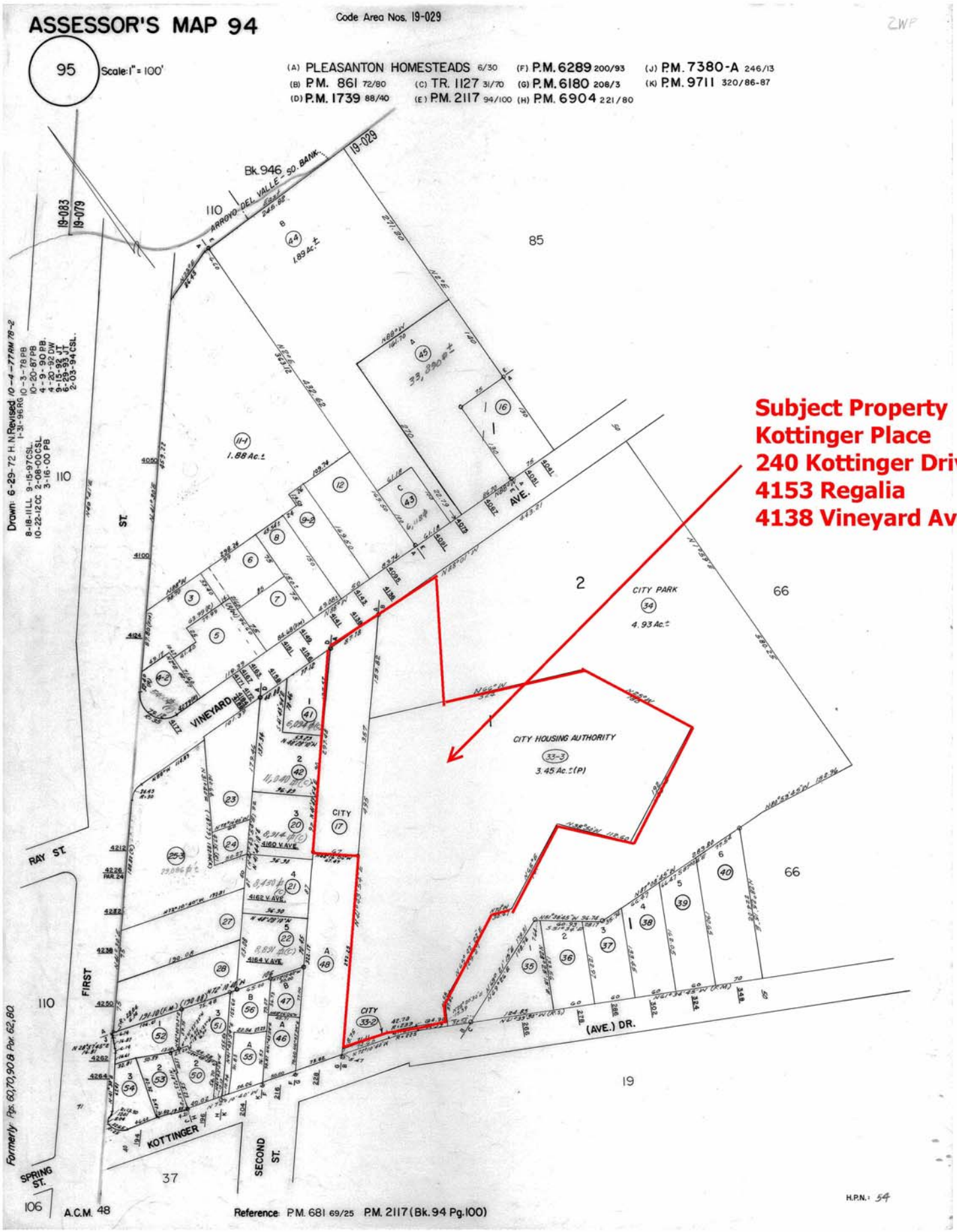
EASTERN EXTENTION OF PLEASANTON (Bk. 7 Pg. 60)
PLEASANTON HOMESTEADS (Bk. 6 Pg. 30)
P.M. 810 (Bk. 72 Pg. 71)
P.M. 2012 (Bk. 94 Pg. 86)
P.M. 2826 107/98
P.M. 6391 211/54

Drn. Dec. 1962 H.N. Rev. 8-22-77 W.K. 78-1
4-3-79 CEP
1-26-94 GSL
9-13-07 ZC

A.C.M. 48

Ref: R.S 297 (R.S. Bk. 6 Pg. 43), P.M. 678 (Bk. 69 Pg. 67) P.M. 839 72/92

For Assessment Use Only



APPENDIX E

OTHER SUPPORTING DOCUMENTATION

PHASE I ESA PRE-SITE INSPECTION QUESTIONNAIRE

Project Manager: Kevin Nawotka | Project No: 315504

PROJECT/SITE INFORMATION

Client Name: Mid Pen

Project Street Address(es): 240 Kottinger Dr

City: Pleasanton County: Alameda State: CA Zip: 94566

CONTACT INFORMATION

Contact	*Name*	*Telephone Number*	*Years Associated w/Site*
Owner:	City of Pleasanton		
Site Contact:	Heather Mucken	925-846-0133	1 1/2
Key Site Mgr:	same	same	same
Previous Owner(s):	NA	NA	NA

PROPERTY USE AND SPECIFICATIONS

- ☐ Single-Family Residential
- ☒ Multi-Family Residential
- ☐ Commercial Office
- ☐ Commercial Retail
- ☐ Vacant or undeveloped
- ☐ Agricultural *specify type:*
- ☐ Industrial *specify type:*
- ☐ Other *specify type:*

Provide a general site description:

Total Property Size: ~~City of Pleasanton~~

Original Construction Date: 1972-1973

Total Number of Buildings: 19

Was Construction Phased? ☐ Yes ☒ No ☐ Unk

Total Sq. Ft. of Buildings:

Dates of Renovations/Phases:

Are there any bodies of water on or immediately adjacent to the site? ☒ Yes ☐ No If yes, please describe:

Creek in park surrounding property

Potable Water Source: | Electricity: PG&E | Gas: PG&E

Any waste water discharge at the site? ☐ Septic Tank/Leachfield ☐ Sanitary Sewer ☐ Other

OCCUPANTS/TENANTS

Current Occupant(s)/Tenant(s)	*Length of occupancy*	*Brief description of on-site operations*
Kottinger Place Senior Apartments 50 units	40 years	Senior apartments - City owned

Please email completed questionnaire to:knawotka@norstarcg.com

Previous Occupant(s)/Tenant(s)	*Length of occupancy*	*Brief description of on-site operations*
N/A		

Has the subject site ever been occupied by the following:
☐ Dry Cleaner ☐ Gas Station ☐ Printing Facility ☐ Manufacturing Facility
If yes, provide length of occupancy:

Have any previous investigations been performed at the subject property? ☐ Yes ☐ No If Yes, are copies available?

If Yes, note type and describe: ☐ Phase I ESA ☐ Phase II ☐ Asbestos ☐ Lead Paint ☐ Radon

ON-SITE ENVIRONMENTAL CONDITIONS

Are you aware of any of the following environmental conditions, either current or former, on the subject site?
NOTE: If applicable, please provide inventory records, inspection records and material safety data sheets to site inspector during site inspection.

Environmental Condition/Issue	*Response*	*Notes on Yes Responses*
Aboveground Storage Tanks	☐ Yes ☑ No	
Underground Storage Tanks	☐ Yes ☑ No	
Hazardous/Toxic Substances	☑ Yes ☐ No	cleanning chemicals only
Stored Chemicals	☑ Yes ☐ No	stored in its own shed
Chemical Spills/Releases	☐ Yes ☑ No	
Dump Areas/Landfills	☐ Yes ☑ No	
Waste Treatment Systems	☐ Yes ☑ No	
Wastewater Discharges	☐ Yes ☑ No	

Please email completed questionnaire to:knawotka@norstarcg.com

[redacted]

Floor Drains/Sumps/Clarifiers	☑ Yes ☐ No	just in bathrooms + laundry room

Are you aware of any of the following environmental conditions, either current or former, on the subject site?

Environmental Condition/Issue	*Response*	*Notes on Yes Responses*
Pits, Ponds, Lagoons	☐ Yes ☑ No	
Stained Soil/Vegetation	☐ Yes ☑ No	
Pesticide/Herbicide Use	☐ Yes ☑ No	
Polychlorinated Biphenyls (PCBs)	☐ Yes ☑ No	
Electrical Transformers	☑ Yes ☐ No	PG&E
Hydraulic Lifts	☐ Yes ☑ No	
Elevators	☐ Yes ☑ No	
Asbestos	☐ Yes ☑ No	
Lead-based paint	☐ Yes ☑ No	
Oil/Gas Wells	☐ Yes ☑ No	
Environmental Clean-ups	☐ Yes ☑ No	
Environmental Permits	☐ Yes ☑ No	

OTHER ENVIRONMENTAL CONDITIONS

Are you aware of any environmental liens recorded against the property? ☐ Yes ☑ No

Are you aware of any pending, past or threatened litigation related to hazardous substances or petroleum products releases at the property? ☐ Yes ☑ No

Are you aware of any cases of extreme water damage or mold throughout the building(s)? ☐ Yes ☑ No
If yes, provide brief explanation.

Person Completing Questionnaire:	Heather Mucler
Title/Affiliation to the subject property:	Administrator Barcelon
Number of Years Associated with the subject property:	1 1/2
Date:	1/2/13

Please email completed questionnaire to:knawotka@norstarcg.com

PHASE I ESA PRE-SITE INSPECTION QUESTIONNAIRE

Project Manager: Kevin Nawotka | Project No: 315504

PROJECT/SITE INFORMATION

Client Name: Mid Penn

Project Street Address: 251 Kottinger Drive

City: Pleasanton | County: Alameda | State: CA | Zip: 94566

CONTACT INFORMATION

Contact	*Name*	*Telephone Number*	*Years Associated w/Site*
Owner:	Pleasanton Gardens Inc		44 years
Site Contact:	Yvette Ochoa	925-846-3050	Since May 2012
Key Site Mgr:		"	
Previous Owner(s):			

PROPERTY USE AND SPECIFICATIONS

☐ Single-Family Residential	☐ Vacant or undeveloped
☒ Multi-Family Residential	☐ Agricultural *specify type:*
☐ Commercial Office	☐ Industrial *specify type:*
☐ Commercial Retail	☐ Other *specify type:*

Provide a general site description:
Senior citizen housing

Total Property Size: 1.95 acres	Original Construction Date: 1969
Total Number of Buildings: 8	Was Construction Phased? ☐ Yes ☒ No ☐ Unk
Total Sq. Ft. of Buildings: 21, 366 sf.	Dates of Renovations/Phases:

Are there any bodies of water on or immediately adjacent to the site? ☐ Yes ☒ No If yes, please describe:

Potable Water Source: City of Pleasanton | Electricity: PG&E | Gas: PG&E

Any waste water discharge at the site? ☐ Septic Tank/Leachfield ☐ Sanitary Sewer ☐ Other

OCCUPANTS/TENANTS

Current Occupant(s)/Tenant(s)	*Length of occupancy*	*Brief description of on-site operations*
Pleasanton Gardens	1969-Present	Senior Housing

Please email completed questionnaire to:knawotka@norstarcg.com

Previous Occupant(s)/Tenant(s)	*Length of occupancy*	*Brief description of on-site operations*
N/A		

Has the subject site ever been occupied by the following:
☐ Dry Cleaner ☐ Gas Station ☐ Printing Facility ☐ Manufacturing Facility
If yes, provide length of occupancy:

Have any previous investigations been performed at the subject property? ☐ Yes ☒ No If Yes, are copies available?

If Yes, note type and describe: ☐ Phase I ESA ☐ Phase II ☐ Asbestos ☐ Lead Paint ☐ Radon

ON-SITE ENVIRONMENTAL CONDITIONS

Are you aware of any of the following environmental conditions, either current or former, on the subject site?
NOTE: If applicable, please provide inventory records, inspection records and material safety data sheets to site inspector during site inspection.

Environmental Condition/Issue	*Response*	*Notes on Yes Responses*
Aboveground Storage Tanks	☐ Yes ☒ No	
Underground Storage Tanks	☐ Yes ☒ No	
Hazardous/Toxic Substances	☐ Yes ☒ No	
Stored Chemicals	☐ Yes ☒ No	
Chemical Spills/Releases	☐ Yes ☒ No	
Dump Areas/Landfills	☐ Yes ☒ No	
Waste Treatment Systems	☐ Yes ☒ No	
Wastewater Discharges	☐ Yes ☒ No	

Please email completed questionnaire to:knawotka@norstarcg.com

Floor Drains/Sumps/Clarifiers	☐ Yes ☒ No	

Are you aware of any of the following environmental conditions, either current or former, on the subject site?

Environmental Condition/Issue	*Response*	*Notes on Yes Responses*
Pits, Ponds, Lagoons	☐ Yes ☒ No	
Stained Soil/Vegetation	☐ Yes ☒ No	
Pesticide/Herbicide Use	☐ Yes ☒ No	
Polychlorinated Biphenyls (PCBs)	☐ Yes ☒ No	
Electrical Transformers	☒ Yes ☐ No	PG+E
Hydraulic Lifts	☐ Yes ☒ No	
Elevators	☐ Yes ☒ No	
Asbestos	☐ Yes ☒ No	
Lead-based paint	☐ Yes ☒ No	
Oil/Gas Wells	☐ Yes ☒ No	
Environmental Clean-ups	☐ Yes ☒ No	
Environmental Permits	☐ Yes ☒ No	

OTHER ENVIRONMENTAL CONDITIONS

Are you aware of any environmental liens recorded against the property? ☐ Yes ☒ No

Are you aware of any pending, past or threatened litigation related to hazardous substances or petroleum products releases at the property? ☐ Yes ☒ No

Are you aware of any cases of extreme water damage or mold throughout the building(s)? ☐ Yes ☒ No
If yes, provide brief explanation.

Person Completing Questionnaire:
Title/Affiliation to the subject property:
Number of Years Associated with the subject property:
Date:

Please email completed questionnaire to:knawotka@norstarcg.com

APPENDIX F

QUALIFICATIONS

Steve G. Kovach –Due Diligence Manager, Northern California Region

B.A. - Botany, Miami University (Ohio)
Minor – Conservation and the Environment

Certified OSHA 40-Hour Hazardous Waste Operations and Emergency Response

Mr. Kovach has spent over eleven years working in a broad range of environmental and engineering disciplines including: engineering and environmental due diligence services, industrial air, water, and wastewater permit compliance and monitoring, hazardous waste management and disposal, electrical utilities projects, environmental engineering projects, and wetland ecology research. Mr. Kovach has worked closely with regulatory agencies including the US Environmental Protection Agency, Department of Toxic Substance Control, California Water Resources Control Board, California Integrated Waste Management Board, Bay Area Air Quality Management District, East Bay Municipal Utilities District, and the United States Department of Energy.

Currently, Mr. Kovach is the Due Diligence Department Manager, Northern California Region for AEI, specializing in environmental due diligence services. As a senior member of AEI, Mr. Kovach provides staff supervision and senior review expertise to ensure ASTM compliance and satisfaction of client requirements for environmental assessments. AEI's review process provides for customization of reports to client needs, as well as strict conformance to ASTM standards. Additionally, Mr. Kovach provides senior project management to ensure ASTM compliance and satisfaction of client requirements for Phase I Environmental Site Assessments, Transaction Screens, and other related environmental assessments performed throughout California, Arizona, Nevada, Oregon, and Washington.

Kevin Nawotka – Associate Consultant

PhD, Biology, State University of New York, 1991
MA, Biology, State University of New York, 1985
BA, Biology, State University of New York, 1979
EPA AHERA Asbestos Inspector

Dr. Nawotka has been conducting Phase I and II Environmental Site Assessments of commercial, industrial and multi-family residential properties throughout the United States since 1990. He has also managed environmental planning, permit requirements, and regulatory compliance issues.

Project experience for Dr. Nawotka includes:

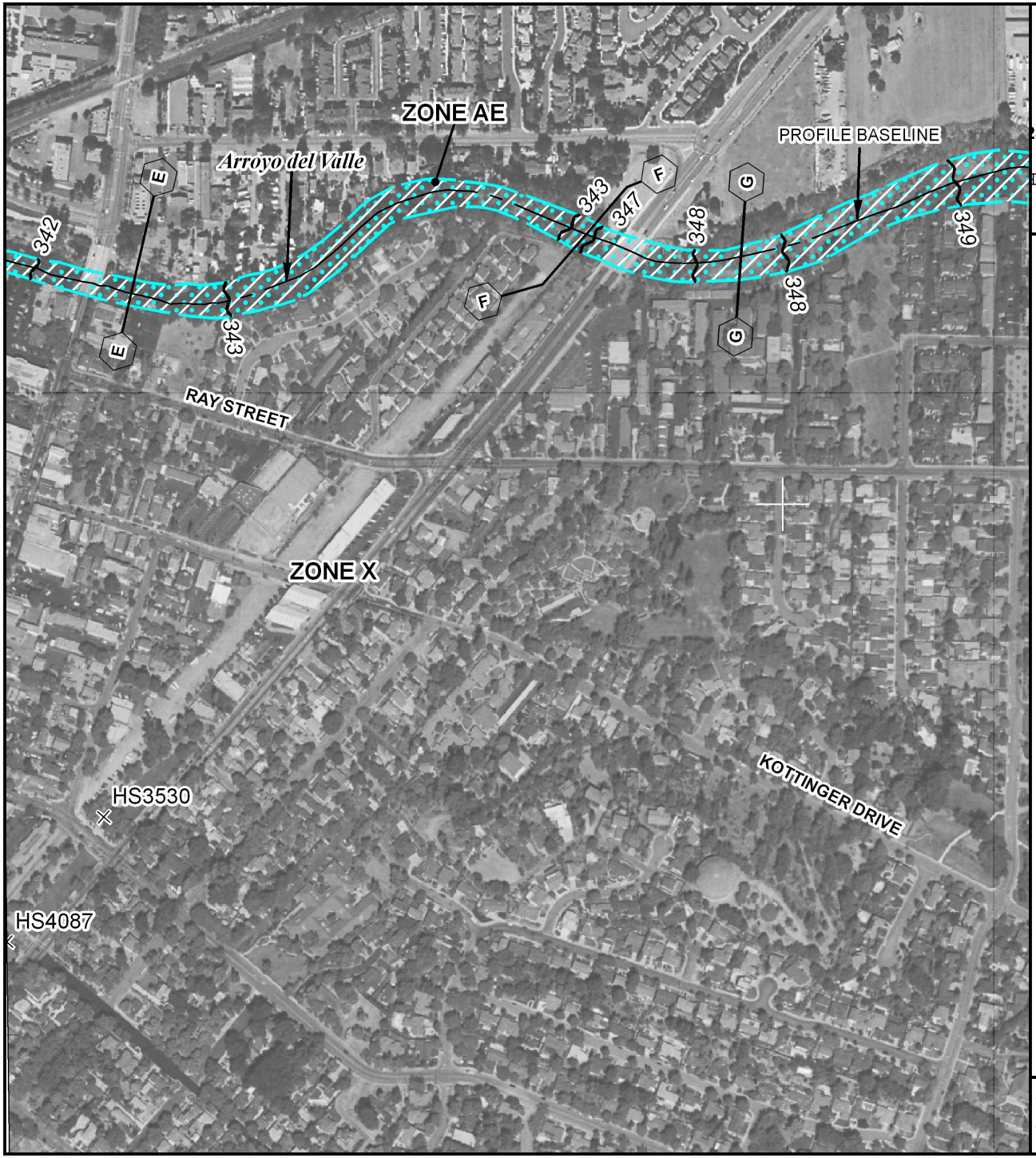
- The management of a 20 property apartment complex portfolio prior to acquisition.
- The performance of several Phase I ESAs according to HUD 221, 223 and 232 protocols.
- The performance of several Phase II investigations at several dry cleaning facilities.
- The performance of NEPA studies at several cell tower facilities.

In addition to his environmental experience, Dr. Nawotka was a Postdoctoral Fellow at Stanford University, and the University of Connecticut. Dr. Nawotka was awarded a National Institute of Health Research Service Award Fellowship. Dr. Nawotka was also the author of several publications that were published in various journals, and submitted several patent applications to the US Patent Office. Dr. Nawotka also served as the regulatory compliance officer for a biotechnology firm.

For a regional environmental consulting firm Dr. Nawotka served as Director of Technical Affairs, where he performed and managed environmental site assessments on various industrial, commercial, institutional and residential properties. Assessments included limited and comprehensive surveys for asbestos, lead-based paint, lead-in-drinking-water and radon gas emissions. He also managed subsurface investigations to determine the presence of contamination in soil and groundwater, prepared written reports in formats prescribed by various fiduciary institutions and performed peer reviews on environmental site assessments completed by other environmental firms.

Appendix F – Hydrology and Water Quality

- **Federal Emergency Management Agency (FEMA).** *Flood Insurance Rate Map (FIRM).* Alameda County, California : s.n., Effective Date August 3, 2009. FIRM Map Panel Number # 06001C0336 G.
- **United States Fish & Wildlife Service.** National Wetlands Inventory. [Online] [Cited: March 5, 2013.] http://www.fws.gov/wetlands/Wetlands-Mapper.html.



MAP SCALE 1" = 500'

250 0 500 1000 FEET

METER

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0336G

FIRM

FLOOD INSURANCE RATE MAP

ALAMEDA COUNTY, CALIFORNIA
AND INCORPORATED AREAS

PANEL 336 OF 725

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
ALAMEDA COUNTY	060001	0336	G
PLEASANTON, CITY OF	060012	0336	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
06001C0336G

EFFECTIVE DATE
AUGUST 3, 2009

Federal Emergency Management Agency

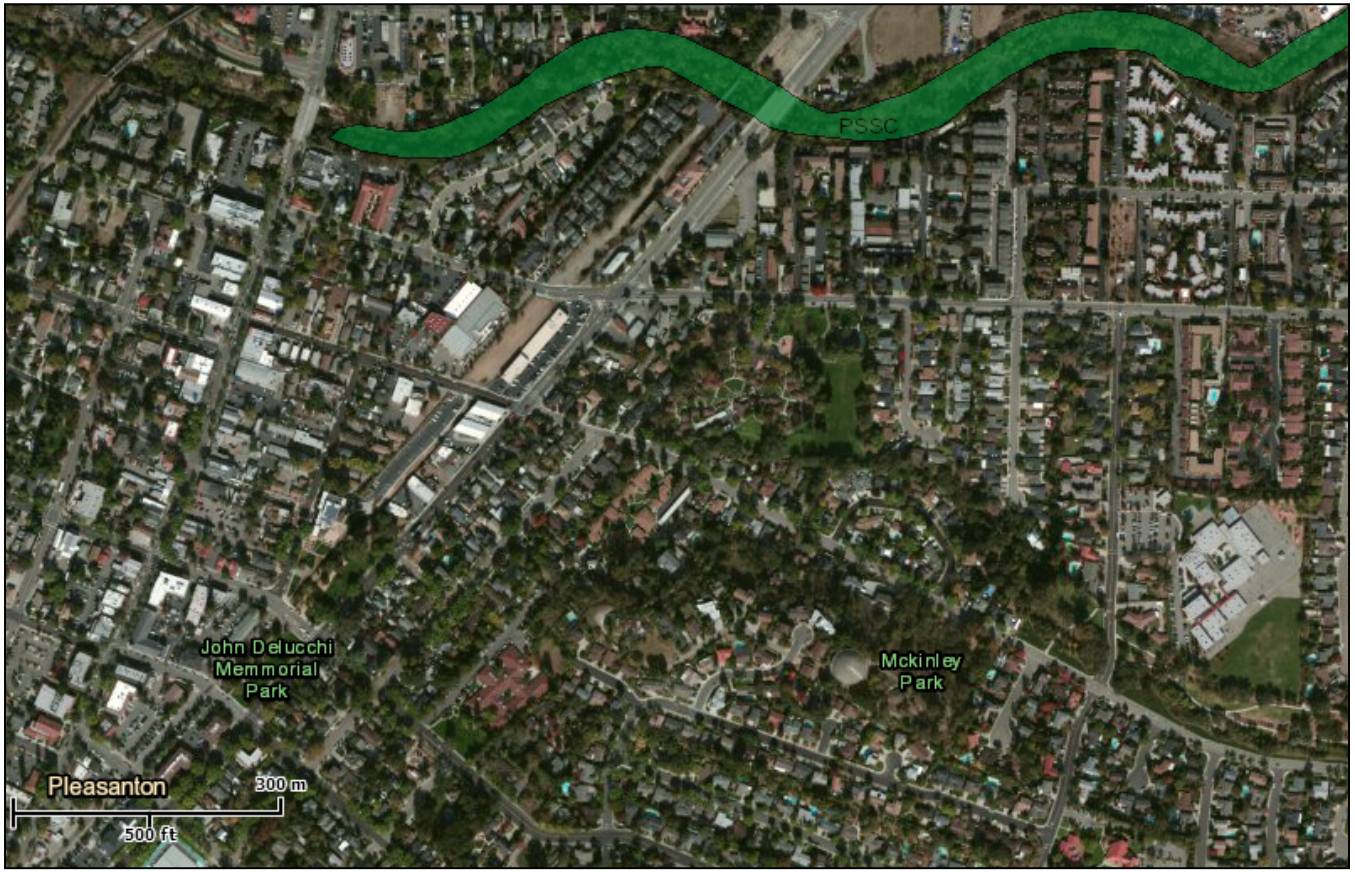
This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

U.S. Fish and Wildlife Service

National Wetlands Inventory

Kottinger Senior Housing

Mar 5, 2013



Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

User Remarks:

Appendix G – Noise

- **Illingworth & Rodkin, Inc.** *Pleasanton Gardens and Kottinger Place Environmental Noise Assessment, Pleasanton, California.* Petaluma, CA : s.n., March 19, 2013. Job No.: 13-053.

PLEASANTON GARDENS AND KOTTINGER PLACE ENVIRONMENTAL NOISE ASSESSMENT PLEASANTON, CALIFORNIA

March 19, 2013

♦ ♦ ♦

Prepared for:

Abby Goldware
Project Manager
MidPen Housing Corp.
303 Vintage Park Drive, Suite 250
Foster City, CA 94404

Prepared by:

Michael S. Thill

ILLINGWORTH & RODKIN, INC.
Acoustics · Air Quality
505 Petaluma Boulevard South
Petaluma, CA 94952
(707) 766-7700

Job No.: 13-053

Introduction

This report presents the results of the environmental noise assessment completed for the Pleasanton Gardens and Kottinger Place residential projects. The project site encompasses four properties; 240 Kottinger Drive, 4138 Vineyard Avenue, 4133 Regalia Court, and 251 Kottinger Drive in Pleasanton, California. The project would develop a 172-189-unit affordable housing project. The project also includes onsite community spaces and amenities, such as a community room, exercise room, computer room, onsite management office, resident services office, and laundry room.

The report first provides a brief description of the fundamentals of environmental noise, summarizes applicable regulatory criteria, and discusses the results of the ambient noise monitoring survey completed to document existing noise conditions. The report then summarizes the evaluation of the project's potential to result in adverse effects with respect to applicable HUD Guidelines. Mitigation is recommended to ensure that the noise compatibility thresholds are achieved.

Fundamentals of Environmental Noise

Noise may be defined as unwanted sound. Noise is usually objectionable because it is disturbing or annoying. The objectionable nature of sound could be caused by its *pitch* or its loudness. *Pitch* is the height or depth of a tone or sound, depending on the relative rapidity (frequency) of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. *Loudness* is intensity of sound waves combined with the reception characteristics of the ear. Intensity may be compared with the height of an ocean wave in that it is a measure of the amplitude of the sound wave.

In addition to the concepts of pitch and loudness, there are several noise measurement scales which are used to describe noise in a particular location. *A decibel (dB)* is a unit of measurement which indicates the relative amplitude of a sound. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis. An increase of 10 decibels represents a ten-fold increase in acoustic energy, while 20 decibels is 100 times more intense, 30 decibels is 1,000 times more intense, etc. There is a relationship between the subjective noisiness or loudness of a sound and its intensity. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness over a fairly wide range of intensities. Technical terms are defined in Table 1.

There are several methods of characterizing sound. The most common in California is the *A-weighted sound level or dBA*. This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Representative outdoor and indoor noise levels in units of dBA are shown in Table 2. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events. This energy-equivalent sound/noise descriptor is called L_{eq}. The most common averaging period is hourly, but L_{eq} can describe any series of noise events of arbitrary duration.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends upon the distance the receptor is from the noise source. Close to the noise source, the models are accurate to within about plus or minus 1 to 2 dBA.

Since the sensitivity to noise increases during the evening and at night -- because excessive noise interferes with the ability to sleep -- 24-hour descriptors have been developed that incorporate artificial noise penalties added to quiet-time noise events. The *Community Noise Equivalent Level*, *CNEL*, is a measure of the cumulative noise exposure in a community, with a 5 dB penalty added to evening (7:00 pm - 10:00 pm) and a 10 dB addition to nocturnal (10:00 pm - 7:00 am) noise levels. The *Day/Night Average Sound Level*, L_{dn}, is essentially the same as CNEL, with the exception that the evening time period is dropped and all occurrences during this three-hour period are grouped into the daytime period.

TABLE 1 Definitions of Acoustical Terms Used in this Report

Term	Definition
Decibel, dB	A unit describing, the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micro Pascals (or 20 micro Newtons per square meter), where 1 Pascal is the pressure resulting from a force of 1 Newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 micro Pascals). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and Ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level, L_{eq}	The average A-weighted noise level during the measurement period.
L_{max}, L_{min}	The maximum and minimum A-weighted noise level during the measurement period.
L_{01}, L_{10}, L_{50}, L_{90}	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Day/Night Noise Level, L_{dn} or DNL	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 pm and 7:00 am.
Community Noise Equivalent Level, CNEL	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels in the evening from 7:00 pm to 10:00 pm and after addition of 10 decibels to sound levels measured in the night between 10:00 pm and 7:00 am.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

Source: Handbook of Acoustical Measurements and Noise Control, Harris, 1998.

TABLE 2 Typical Noise Levels in the Environment

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110 dBA	Rock band
Jet fly-over at 1,000 feet		
	100 dBA	
Gas lawn mower at 3 feet		
	90 dBA	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	80 dBA	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawn mower, 100 feet	70 dBA	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	60 dBA	
		Large business office
Quiet urban daytime	50 dBA	Dishwasher in next room
Quiet urban nighttime	40 dBA	Theater, large conference room
Quiet suburban nighttime		
	30 dBA	Library
Quiet rural nighttime		Bedroom at night, concert hall
	20 dBA	
		Broadcast/recording studio
	10 dBA	
	0 dBA	

Source: Technical Noise Supplement (TeNS), Caltrans, November 2009.

Regulatory Background

HUD Noise Compatibility Criteria

The U.S. Department of Housing and Urban Development (HUD) environmental noise regulations are set forth in 24CFR Part 51B (Code of Federal Regulations). The following exterior noise standards for new housing construction would be applicable to this project.

- 65 dBA L_{dn} or less – acceptable.
- exceeding 65 dBA L_{dn} but not exceeding 75 dBA L_{dn} – normally unacceptable (appropriate sound attenuation measures must provide an additional 5 decibels of attenuation over that typically provided by standard construction in the 65 dBA L_{dn} to 70 dBA L_{dn} zone; 10 decibels additional attenuation in the 70 dBA L_{dn} to 75 dBA L_{dn} zone)
- exceeding 75 dBA L_{dn} – unacceptable

These noise standards also apply, "… at a location 2 meters from the building housing noise sensitive activities in the direction of the predominant noise source…" and "…at other locations where it is determined that quiet outdoor space is required in an area ancillary to the principal use on the site."

A goal of 45 dBA L_{dn} is set forth for interior noise levels and attenuation requirements are geared toward achieving that goal. It is assumed that with standard construction any building will provide sufficient attenuation to achieve an interior level of 45 dBA L_{dn} or less if the exterior level is 65 dBA L_{dn} or less. Where exterior noise levels range from 65 dBA L_{dn} to 70 dBA L_{dn}, the project must provide a minimum of 25 decibels of attenuation, and a minimum of 30 decibels of attenuation is required in the 70 dBA L_{dn} to 75 dBA L_{dn} zone.

Existing Noise Environment

Noise monitoring was completed at the site between March 13 and 15, 2013 in order to quantify existing ambient noise levels. The noise monitoring survey included one long-term measurement (LT-1) and one short-term measurement (ST-1), as shown in Figure 1. The existing noise environment at the site results primarily from local traffic on Vineyard Avenue and Kottinger Drive.

Long-term noise measurement site LT-1 was located approximately 35 feet from the center of Kottinger Drive and about 12 feet above the ground. Hourly average noise levels typically ranged from 52 to 60 dBA L_{eq} during the day and from 39 to 55 dBA L_{eq} at night. The calculated day-night average noise level at this location was 60 dBA L_{dn}. The trend in noise levels at LT-1 over the 48-hour monitoring period is shown in Figure 2.

Short-term noise measurement ST-1 was made approximately 40 feet from the center of Vineyard Avenue. The average noise level between 12:00 p.m. and 1:00 p.m. on Wednesday March 13, 2013 was 63 dBA L_{eq}. A second noise measurement was made at this same location

between 11:00 a.m. and 12:00 p.m. on Friday, March 15, 2013. The average noise level during this time period was 61 dBA L_{eq}. The L_{dn} at site ST-1 is estimated to be 65 dBA.

Figure 1: Site Vicinity and Noise Monitoring Locations

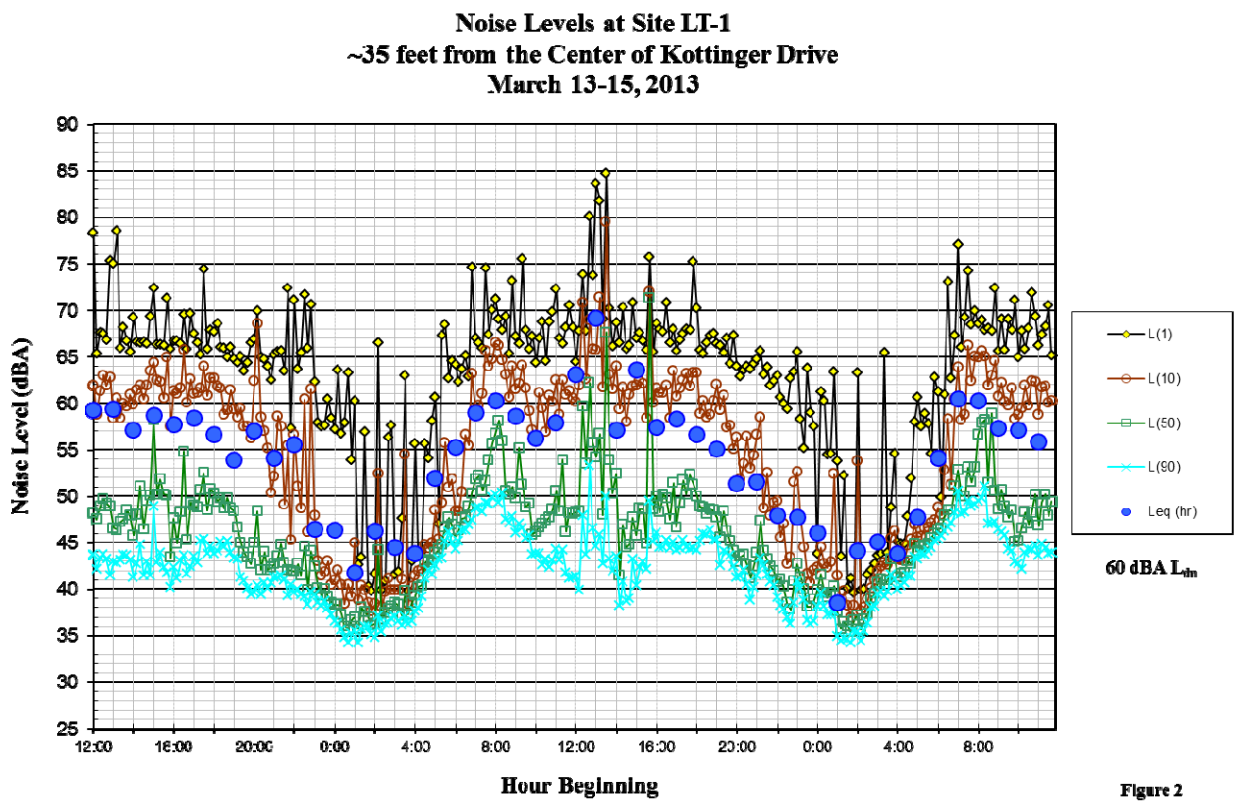


Figure 2

Noise Assessment

Significance Criteria

An adverse effect would result if noise levels at the project site would exceed the U.S. Department of Housing and Urban Development's (HUD) Compatibility Guidelines for acceptability. Exterior noise levels exceeding 65 dBA L_{dn} at sensitive outdoor use areas or interior noise levels exceeding 45 dBA L_{dn} would result in an adverse effect.

Future Exterior Noise Environment

The future exterior noise environment at the project site was calculated by adjusting the measured noise data to account future traffic conditions along Vineyard Avenue and Kottinger Drive. The future noise environment at proposed noise sensitive receptors adjacent to Vineyard Avenue and Kottinger Drive would be about 1 dBA higher than existing conditions assuming a 1% to 2% increase in traffic volumes per year over the next 15 to 20 years. These projections were also compared to the data presented in the 2005 Pleasanton Plan 2025 and confirmed. The 2005 Pleasanton Plan 2025 indicates that the future 65 dBA L_{dn} noise contour along Vineyard Avenue (east of First Street) would be located 60 feet from the roadway centerline by 2025.

Based on these data, future exterior noise levels would reach 66 dBA L_{dn} at a distance of 45 feet from the center of Vineyard Avenue, equivalent to the northernmost façade of the multi-family building proposed nearest the roadway. Future noise levels at the buildings proposed nearest to Kottinger Drive are calculated to reach 60 dBA L_{dn} at a distance of 50 feet from the centerline.

Future exterior noise levels would exceed HUD's 65 dBA L_{dn} threshold within approximately 60 feet of the Vineyard Avenue centerline. HUD's "normally acceptable" threshold for noise levels at outdoor spaces would be met at distances greater than 60 feet from the center of Vineyard Avenue and at outdoor spaces proposed adjacent to Kottinger Drive.

The conceptual site plan indicates there are a number of green spaces and community amenities located at distances greater than 60 feet from the center of Vineyard Avenue. If it is determined that quiet outdoor space is required within 60 feet of the center of Vineyard Avenue, minimum 5-foot noise barriers should be constructed to reduce noise levels to less than 65 dBA L_{dn}.

Future Interior Noise Environment

Residential units proposed within 60 feet of the Vineyard Avenue centerline would be exposed to future exterior noise levels greater than 65 dBA L_{dn}. The predicted exterior noise level at the nearest facades, approximately 45 feet from the center of Vineyard Avenue, would exceed HUD'S "normally acceptable" threshold by 1 dBA L_{dn}, and would require an additional 5 decibels of attenuation to achieve acceptable levels in interior spaces. Approximately 25 decibels of attenuation would be required within the interiors of these units.

To determine the expected interior noise levels resulting from exterior noise sources, calculations were made to estimate the transmission loss provided by generic building elements. The relative areas of these elements were input into an acoustical model to calculate interior noise levels. The exterior wall construction of the proposed units was assumed as a standard 2x4 or 2x6 wood stud wall with insulation, a single layer of gypsum board attached to the inside of the studs, and an exterior finish consisting of wood or cement board siding. This exterior wall construction has a rating of STC 39. Various windows and doors were then tested to determine the sound transmission class ratings for these building elements necessary to achieve the improved sound insulation rating. HUD Figure 19, located at the end of this report, provides a summary of the inputs used to complete the calculations of interior noise levels at the project's worst-case noise exposure.

The results of the calculations showed that windows/doors within 60 feet of the center of Vineyard Avenue and having direct line of sight to the roadway should be 24 STC or greater. These windows, in combination with the proposed wall construction, would achieve an outdoor-to-indoor composite noise reduction of 29 decibels with the windows closed and would maintain interior noise levels below 45 dBA L_{dn} with an adequate margin of safety. Additionally, all units within 100 feet of the centerline of Vineyard Avenue should be mechanically ventilated so that windows can be kept closed at the occupant's discretion to control noise. No additional mitigation would be required.

Figure 19
Description of Noise Attenuation Measures
(Acoustical Construction)

Part I

Project Name: Kottinger Place (Worst-Case Exposure)

Location: Pleasanton, California

Sponsor/Developer: MidPen Housing

Noise Level (From NAG): 66 dBA DNL Attenuation Required: 25 dBA
Primary Noise Source(s): Vineyard Avenue

Part II

1. For wall(s) facing and parallel to the noise source(s) (or closest to parallel:
   a. Description of wall construction*: Wood or cement board exterior siding, insulated wood stud, gypsum board interior
   b. STC rating for wall (rated for no windows or doors): STC 39
   c. Description of windows: Vinyl, dual-pane windows, 4 ft. x 6 ft.
   d. STC rating for window type: STC 24
   e. Description of doors: N/A
   f. STC rating for doors: N/A
   g. Percentage of wall (per wall, per dwelling unit) composed of windows: 25% and doors: 0%
   h. Combined STC rating for wall component: 29 dBA

2. For walls perpendicular to noise source(s):
   a. Description of wall construction*: NA
   b. STC rating for wall (rated for no windows or doors): NA
   c. Description of windows: NA
   d. STC rating for windows: NA
   e. Description of doors: N/A
   f. STC rating for doors: NA
   g. Percentage of wall (per wall, per dwelling unit) composed of windows: NA and doors: NA
   h. Combined STC rating for wall component: NA

3. Roofing component (if overhead attenuation is required to aircraft noise):
   a. Description of roof construction: N/A
   b. STC rating (rated as if no skylights or other openings): N/A
   c. Description of skylights or overhead windows: N/A
   d. STC rating for skylights or overhead windows: N/A
   e. Percentage of roof composed of skylights or windows (per dwelling unit): N/A
   f. Percentage of roof composed of large uncapped openings such as chimneys: N/A
   g. Combined STC rating for roof component: N/A

4. Description of type of mechanical ventilation provided: Satisfactory forced air mechanical ventilation system.

Prepared by:

Michael S. Thill

Date: March 18, 2013

Appendix H – Transportation

- **Whitlock & Weinberger Transportation, Inc.** *Kottinger Drive Senior Housing Project Traffic Impact Analysis.* Santa Rosa, CA and Oakland, CA : s.n., June 5, 2013.

Kottinger Drive Senior Housing Project Traffic Impact Analysis

To the City of Pleasanton

From MidPen Housing Corporation

Submitted by

Whitlock & Weinberger Transportation, Inc.

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June 5, 2013

Balancing Functionality and Livability
Traffic Engineering • Transportation Planning

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Executive Summary

The proposed Kottinger Drive Housing project would result in the development of up to 189 residential units for seniors on a site located at 240 Kottinger Drive (Kottinger Place) and 251 Kottinger Drive (Pleasanton Gardens) in the City of Pleasanton. The proposed project would demolish the 90 existing senior housing units and build up to 59 new units on the Pleasanton Gardens site and up to 130 units on the Kottinger Place site, for a net increase of 99 senior units. It was determined that this project was not included in the recently approved *Pleasanton Housing Element EIR.*

The project is anticipated to generate an average of 295 net new trips on a daily basis, of which 20 trips would occur during the morning peak hour and 24 trips during the evening peak hour.

Currently the study intersection of 1st Street/Bernal Avenue-Sunol Boulevard operates unacceptably at LOS E during the p.m. peak hour and it would continue to do so under all study scenarios without and with the addition of project-generated traffic. However, according to the *City of Pleasanton General Plan*, Downtown intersections, including 1st Street/Bernal Avenue-Sunol Boulevard, are exempt from the LOS D standard unless the City determines that improvements necessary to maintain LOS D are consistent with the goals for the *Downtown Specific Plan.* All the remaining study intersections would operate at acceptable levels of service under all study scenarios without and with the addition of project-generated traffic.

Access to the project site would be provided via two existing driveways on Kottinger Drive and one on Vineyard Avenue together with one proposed new full access driveway on Vineyard Avenue. To maintain clear sight lines, it is recommended that on-street parking be prohibited for 50 feet on either side of the proposed driveway and 50 feet west of the existing driveway on Vineyard Avenue. Additionally, periodic maintenance, including trimming of the vegetation on both sides of the project driveways on Kottinger Drive and Vineyard Avenue, should be undertaken.

The proposed project would provide 152 parking spaces which is expected to be adequate to satisfy the projected parking demand of 0.8 parking spaces per dwelling unit, which is the same as the current site.

Pedestrian and bicycle access to the site is expected to be adequate. Separate pedestrian entrances on Kottinger Drive would be provided to connect the Pleasanton Gardens and Kottinger Place sites and avoid pedestrian access through the parking lot. Existing transit route and bus stops adjacent to the project site on Kottinger Drive, Vineyard Avenue and 1st Street would adequately serve the project-generated transit trips.

Introduction

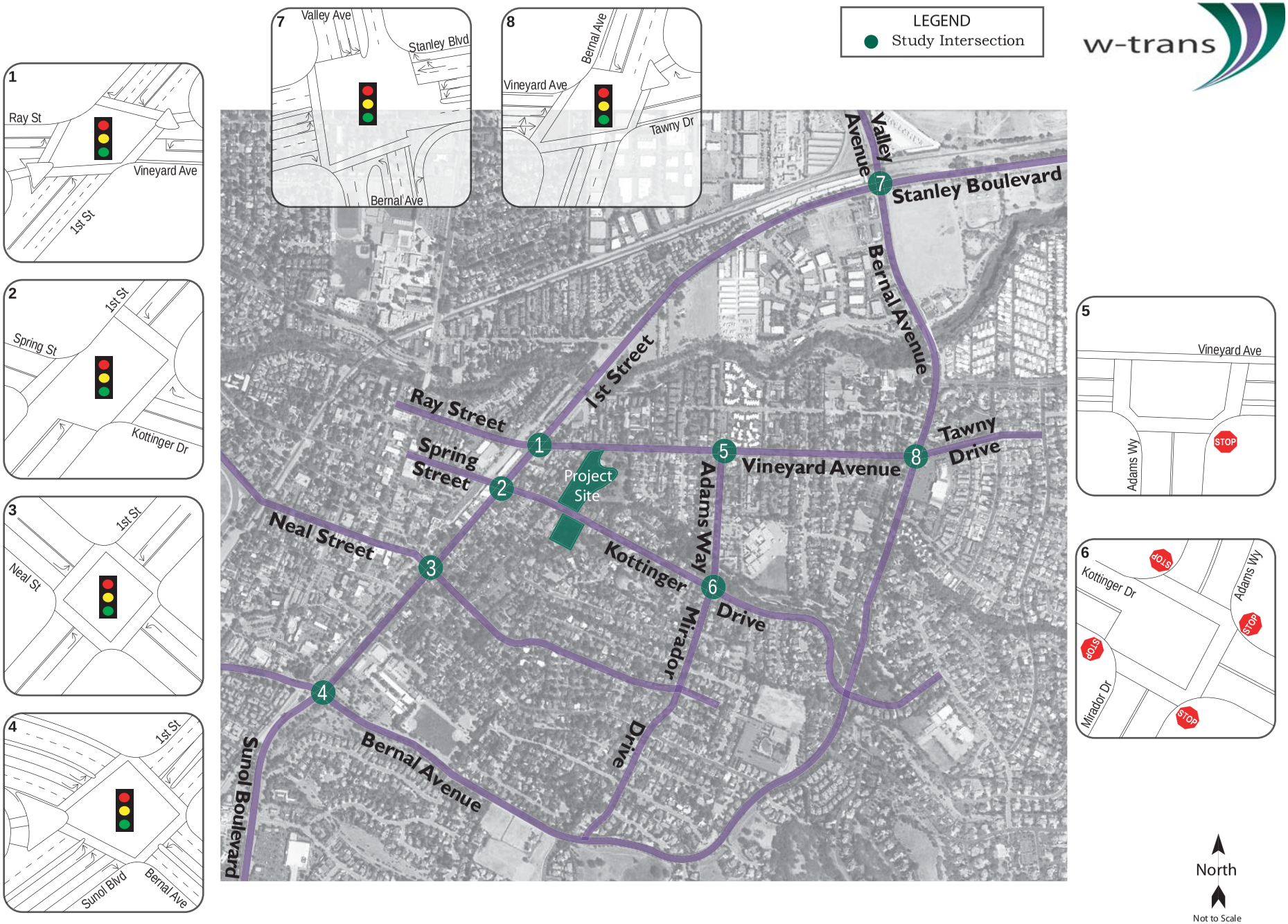
This report presents an analysis of the potential traffic impacts that would be associated with the development of up to 189 residential units for seniors located at 240 Kottinger Drive and 251 Kottinger Drive in the City of Pleasanton. The traffic study was completed in accordance with the criteria established by the City of Pleasanton, and is consistent with standard traffic engineering techniques.

Prelude

The purpose of a traffic impact study is to provide City staff and policy makers with data that they can use to make an informed decision regarding the potential traffic impacts of a proposed project, and any associated improvements that would be required in order to mitigate these impacts to a level of insignificance as defined by the City's General Plan or other policies. Vehicular traffic impacts are typically evaluated by determining the number of new trips that the proposed use would be expected to generate, distributing these trips to the surrounding street system based on existing travel patterns or anticipated travel patterns specific to the proposed project, then analyzing the impact the new traffic would be expected to have on critical intersections or roadway segments. Impacts relative to safety, including for pedestrians and bicyclists, and to transit are also addressed.

Project Profile

The project as proposed includes the development of up to 189 residential units for seniors on sites that are located at 240 Kottinger Drive (Kottinger Place) and 251 Kottinger Drive (Pleasanton Gardens) in the City of Pleasanton, as shown in Figure 1. Currently, the two project sites are occupied by 90 residential units (50 on the Kottinger Place site and 40 on the Pleasanton Gardens site) for seniors. The proposed project would demolish the existing units and build up to 59 new units on the Pleasanton Gardens site and up to 130 units on the Kottinger Place site, for a net increase of 99 senior residential units. As part of the proposed project, the Regalia House site located at 4133 Regalia Court and a vacant parcel located at 4138 Vineyard Avenue would be incorporated into the new plan for Kottinger Place. The Kottinger Place project site would be accessed via three access points: two on Vineyard Avenue and one on Kottinger Drive, while the Pleasanton Gardens project site would be accessed via one access point on Kottinger Drive.



Kottinger Drive Senior Housing Project Traffic Impact Analysis

City of Pleasanton

Figure 1

Study Area and Lane Configurations

Operational Analysis

Study Area and Periods

The study area includes the immediate site vicinity and local roadways, as well as the following eight intersections:

1. 1st Street/Vineyard Avenue-Ray Street
2. 1st Street/Kottinger Drive-Spring Street
3. 1st Street/Neal Street
4. 1st Street/Bernal Avenue
5. Vineyard Avenue/Adams Way
6. Kottinger Drive/Adams Way-Mirador Drive
7. Stanley Boulevard/Bernal Avenue-Valley Avenue
8. Bernal Avenue/Vineyard Avenue-Tawny Drive

Operating conditions during typical weekday the a.m. and p.m. peak periods were evaluated to capture the highest potential impacts for the proposed project as well as the highest volumes on the local transportation network. The morning peak hour occurs between 7:00 and 9:00 a.m. and reflects conditions during the home to work or school commute, while the p.m. peak hour occurs between 4:00 and 6:00 p.m. and typically reflects the highest level of congestion during the homeward bound commute.

At the direction of City staff, traffic volume data presented in the recently approved *Pleasanton Housing Element Transportation Analysis* (Fehr & Peers, 2011), were incorporated into this analysis. Existing traffic volume data were not available for the study intersections of Kottinger Drive/Adams Way and Vineyard Avenue/Adams Way; therefore, new a.m. (7:00-9:00) and p.m. (4:00-6:00) peak hour turning movement counts were conducted in April 2013.

Study Intersections

1st Street/Ray Street-Vineyard Avenue is a four-way, signalized intersection with protected left-turn phasing on the northbound and southbound 1st Street approaches and split, or exclusive, phasing on the eastbound Ray Street approach and westbound Vineyard Street approach. Marked crosswalks are provided across all legs of the intersection, along with pedestrian signals and push buttons.

1st Street/Kottinger Drive-Spring Street is a signalized four-legged intersection with permissive left-turn phasing on all approaches. Marked crosswalks and pedestrian signal heads with push buttons are provided across all legs of the intersection except the southern leg.

1st Street/Neal Street is a four-legged, signalized intersection with permissive left-turn phasing on all approaches. Marked crosswalks and pedestrian crossing signal equipment are provided across all legs of the intersection.

1st Street/Bernal Avenue is a four-legged signalized intersection with protected left-turn phasing on all approaches. Marked crosswalks and pedestrian crossing signal equipment are provided across all legs of the intersection.

Vineyard Avenue/Adams Way is an unsignalized tee-intersection with the eastbound and westbound Vineyard Street approaches being free and the northbound Adams Way approach being stop controlled. Marked crosswalks are provided across all legs of the intersection.

Kottinger Drive/Adams Way-Mirador Drive is a four-way, all-way stop-controlled intersection. Marked crosswalks are provided across all legs of the intersection except the western leg.

Stanley Boulevard/Bernal Avenue-Valley Avenue is a four-legged, signalized intersection with protected left-turn phasing on all approaches. Marked crosswalks and pedestrian crossing signal equipment are provided across the southern and western legs.

Bernal Avenue/Vineyard Avenue-Tawny Drive is a four-legged, signalized intersection with protected left-turn phasing on the northbound and southbound Bernal Avenue approaches and exclusive left–turn phasing on the eastbound and westbound Kottinger Drive-Tawny Drive approaches. Marked crosswalks with pedestrian signal heads and push buttons are provided across all legs of the intersection except the southern leg.

The locations of the study intersections as well as the existing lane configurations and traffic controls are shown in Figure 1.

Alternative Modes

Pedestrian Facilities

Pedestrian facilities include sidewalks, crosswalks, pedestrian signal phases, curb ramps, curb extensions, and various streetscape amenities such as lighting, benches, etc. In general, a network of sidewalks, crosswalks, pedestrian signals, and curb ramps provide access for pedestrians in the vicinity of the proposed project site. Marked crosswalks and pedestrian signal phasing are provided at all signalized intersections. Additionally, a mid-block crosswalk exists on Kottinger Drive near the project vicinity providing pedestrian connectivity between the Pleasanton Gardens and Kottinger Place sites.

Bicycle Facilities

The *Highway Design Manual*, California Department of Transportation (Caltrans), 2012, classifies bikeways into three categories:

- *Class I Multi-Use Path*: 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*: a striped and signed lane for one-way bike travel on a street or highway.
- *Class III Bike Route*: signing only for shared use with motor vehicles within the same travel lane on a street or highway.

Within the project vicinity, Class II bike lanes exist on Vineyard Avenue, First Street north of Vineyard Avenue, and Bernal Avenue south of Stanley Boulevard.

Transit Facilities

Transit service in Pleasanton is provided by three agencies: The Livermore Amador Valley Transit Authority provides fixed route bus service, and the Bay Area Rapid Transit District (BART) and the

Altamont Commuter Express (ACE) both operate commuter rail service. Following is a summary of the transit lines that currently service the project site.

Wheels Bus

The Livermore Amador Valley Transit Authority provides fixed route bus service under the name "Wheels" in the City of Pleasanton as well as the neighboring Cities of Dublin, Livermore, and unincorporated portions of Alameda County.

Wheels Bus Route 8 provides weekday and weekend (Saturday) service along Kottinger Drive and Vineyard Avenue between the East Dublin/Pleasanton BART Station and Downtown Pleasanton connecting Hopyard Road, Civic Center, Senior Center, Fairgrounds and Vintage Hills. During weekdays, service is provided between 6:00 a.m. and 7:00 p.m. with about 60-minute headways. On Saturdays, service is provided between 6:00 a.m. and 9:00 p.m. with approximately 60 to 120 minute headways. Bus stops are provided in both the eastbound and westbound directions along the Kottinger Place site frontage. The eastbound direction bus stop is on the south side of Vineyard Avenue just east of Regalia Court. The westbound direction bus stop is on the north side of Kottinger Drive approximately 190 feet east of 2nd Street.

Wheels Bus Route 10 provides weekday and weekend service along 1st Street between the East/Dublin Pleasanton Station to the west and Livermore Transit Center and beyond to the east. On weekday evenings and weekends, this route continues east to the Stoneridge Mall. Service is generally provided between 4:30 a.m. and 12:30 a.m. with approximately 30 to 40 minute headways. Bus stops are provided in both the northbound and southbound directions on 1st Street near the project vicinity. The northbound direction bus stop is located on the east side of 1st Street just north of Kottinger Drive. The southbound direction bus stop is located on the west side of 1st Street approximately 200 feet north of Kottinger Drive.

Two bicycles can be carried on most Wheels buses. Bike rack space is on a first come, first served basis. Additional bicycles are allowed on Wheels buses at the discretion of the driver.

Dial-a-ride, also known as paratransit, or door-to-door service, is available for those who are unable to independently use the transit system due to a physical or mental disability. The City of Pleasanton Dial-a-ride is designed to serve the needs of individuals with disabilities within Pleasanton which is supplemented by the Livermore Amador Valley Transit Authority in the greater Livermore-Amador Valley region.

BART

The Bay Area Rapid Transit District (BART) provides heavy-rail rapid transit service within Alameda, Contra Costa, San Francisco and San Mateo Counties. The East Dublin/Pleasanton station, located along I-580 between Hopyard Road-Dougherty Road and Hacienda Drive, is the easternmost station along that segment of the BART system and is approximately four miles northwest of the proposed project site. Additionally the West Dublin Pleasanton station, located near the Stoneridge Mall, serves the City. One line provides service to the two Dublin/Pleasanton stations with the line terminating in Daly City. Passengers can transfer to other BART lines that terminate at Richmond, Pittsburg/Bay Point, Fremont, Millbrae and the San Francisco International Airport. Wheels Bus Route 8 provides service between the project site and the East Dublin/Pleasanton BART Station.

ACE

The Altamont Commuter Express (ACE) is an intra-city rail transit service that provides commuter service between Stockton and San Jose with ten stations. Four westbound trains are provided in the morning and four eastbound trains are provided in the evening. The ACE station in Pleasanton is located at Pleasanton Avenue north of Bernal Avenue. Wheels Bus Route 8 does not provide direct service between the project site and the Pleasanton ACE station.

Capacity Analysis

Intersection Level of Service Methodologies

Level of Service (LOS) is used to rank traffic operation on various types of facilities based on traffic volumes and roadway capacity using a series of letter designations ranging from A to F. Generally, Level of Service A represents free flow conditions and Level of Service F represents forced flow or breakdown conditions. A unit of measure that indicates a level of delay generally accompanies the LOS designation.

The study intersections were analyzed using methodologies published in the *Highway Capacity Manual* (HCM), Transportation Research Board, 2000. This source contains methodologies for various types of intersection control, all of which are related to a measurement of delay in average number of seconds per vehicle. The use of these methodologies is consistent with the recently completed City of Pleasanton Housing Element traffic analysis.

The Levels of Service for the study intersection of Vineyard Avenue/Adams Way, which has side-street stop controls, were analyzed using the "Two-Way Stop-Controlled" intersection capacity method from the HCM. This methodology determines a level of service for each minor turning movement by estimating the level of average delay in seconds per vehicle. Results are presented for individual movements together with the weighted overall age delay for the intersection.

The study intersection of Kottinger Drive/Adams Way has stop signs on all approaches, and was analyzed using the "All-Way Stop-Controlled" Intersection" methodology from the HCM. This methodology evaluates delay for each approach based on turning movements, opposing and conflicting traffic volumes, and the number of lanes. Average vehicle delay is computed for the intersection as a whole, and is then related to a Level of Service.

All of the remaining study intersections are controlled by traffic signals and were evaluated using the signalized methodology from the HCM. This methodology is based on factors including traffic volumes, green time for each movement, phasing, whether or not the signals are coordinated, truck traffic, and pedestrian activity. Average stopped delay per vehicle (in seconds) is used as the basis for evaluation in this LOS methodology.

The ranges of delay associated with the various levels of service are indicated in Table 1.

Table 1
Intersection Level of Service Criteria

LOS	Two-Way Stop-Controlled	All-Way Stop-Controlled	Signalized
A	Delay of 0 to 10 seconds. Gaps in traffic are readily available for drivers exiting the minor street.	Delay of 0 to 10 seconds. Upon stopping, drivers are immediately able to proceed.	Delay of 0 to 10 seconds. Most vehicles arrive during the green phase, so do not stop at all.
B	Delay of 10 to 15 seconds. Gaps in traffic are somewhat less readily available than with LOS A, but no queuing occurs on the minor street.	Delay of 10 to 15 seconds. Drivers may wait for one or two vehicles to clear the intersection before proceeding from a stop.	Delay of 10 to 20 seconds. More vehicles stop than with LOS A, but many drivers still do not have to stop.
C	Delay of 15 to 25 seconds. Acceptable gaps in traffic are less frequent, and drivers may approach while another vehicle is already waiting to exit the side street.	Delay of 15 to 25 seconds. Drivers will enter a queue of one or two vehicles on the same approach, and wait for vehicle to clear from one or more approaches prior to entering the intersection.	Delay of 20 to 35 seconds. The number of vehicles stopping is significant, although many still pass through without stopping.
D	Delay of 25 to 35 seconds. There are fewer acceptable gaps in traffic, and drivers may enter a queue of one or two vehicles on the side street.	Delay of 25 to 35 seconds. Queues of more than two vehicles are encountered on one or more approaches.	Delay of 35 to 55 seconds. The influence of congestion is noticeable, and most vehicles have to stop.
E	Delay of 35 to 50 seconds. Few acceptable gaps in traffic are available, and longer queues may form on the side street.	Delay of 35 to 50 seconds. Longer queues are encountered on more than one approach to the intersection.	Delay of 55 to 80 seconds. Most, if not all, vehicles must stop and drivers consider the delay excessive.
F	Delay of more than 50 seconds. Drivers may wait for long periods before there is an acceptable gap in traffic for exiting the side streets, creating long queues.	Delay of more than 50 seconds. Drivers enter long queues on all approaches.	Delay of more than 80 seconds. Vehicles may wait through more than one cycle to clear the intersection.

Reference: *Highway Capacity Manual,* Transportation Research Board, 2000

Traffic Operation Standards

The City of Pleasanton has adopted an LOS standard of D or better for intersection operations per the General Plan (adopted July 2009). However, there are a few exceptions to the LOS D standard in the Downtown area and at the City of Pleasanton gateway intersections. These intersections may have a level of service below the LOS D standard if no reasonable mitigation exists or if the necessary mitigation is contrary to other goals and policies of the City. Traffic impacts at the study intersections would be considered significant if the Project would result in any of the following:

<u>Signalized Intersections</u>

- Deterioration of a signalized intersection from LOS D (or better) to LOS E or LOS F
- The project adds ten or more trips to a signalized intersection projected to operate at LOS E prior to the addition of project traffic

Unsignalized Intersections

- Deterioration of a controlled movement at an unsignalized intersection from LOS E or better to LOS F, or at intersections where a controlled movement already operates at LOS F, one of the following:
  - Project traffic results in satisfaction of the peak hour volume traffic signal warrant;
  - Project traffic increases minor movement delay by more than 30 seconds; or
  - Where the peak hour volume signal warrant is met without Project traffic and delay cannot be measured, Project increases traffic by 10 or more vehicles per lane on the controlled approach.

Traffic Model

The City of Pleasanton's traffic model is maintained by City Staff and uses Synchro analysis software. The model was provided by City staff to use for this analysis. This citywide model was last updated for the City's Housing Element update and is consistent with the buildout of the City's General Plan. The proposed project was not included in the environmental analysis for the City's Housing Element update. Level of service was evaluated at the study intersections for the following scenarios:

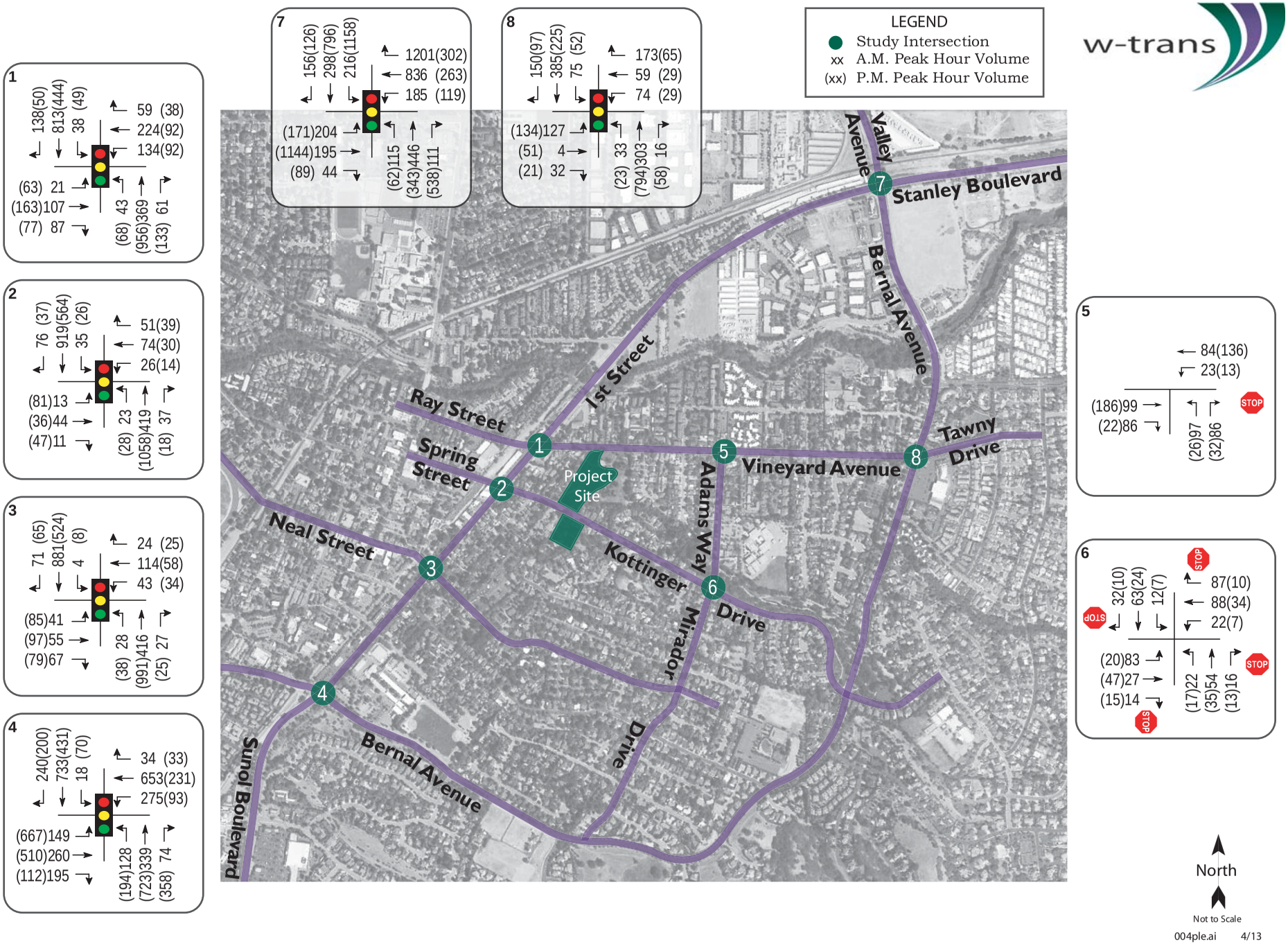
- *Existing conditions* – traffic volume data were obtained directly from the model for the existing conditions without project scenario.
- *Existing plus Project conditions* – project traffic volumes were added to the existing conditions traffic volumes to represent existing plus project conditions.
- *Existing plus Approved Projects conditions* – short-term future traffic volume data was directly obtained from the City's model.
- *Existing plus Approved Projects plus Project conditions* – project traffic volumes were added to the short-term conditions traffic volumes to represent existing plus approved project plus project conditions.
- *Cumulative conditions* – Cumulative conditions traffic volumes were obtained directly from City's model.
- *Cumulative plus Project conditions* – project traffic volumes were added to the cumulative conditions traffic volumes to represent cumulative plus project conditions.

Recent traffic volume data for the intersections of Kottinger Drive/Adams Way and Vineyard Avenue/ Adams Way were not available. Therefore, traffic volumes for these intersections under short-term and cumulative scenarios were developed based on balancing traffic volumes with adjacent intersections.

Existing Conditions

The Existing Conditions scenario provides an evaluation of current operation based on existing traffic volumes during the a.m. and p.m. peak periods. This condition does not include project-generated traffic volumes.

Under existing conditions, all study intersections operate acceptably at LOS D or better except for the intersection of First Street/Bernal Avenue-Sunol Boulevard, which currently operates at LOS E during the p.m. peak hour. According to the *City of Pleasanton General Plan*, Downtown intersections, including 1st Street/Bernal Avenue-Sunol Boulevard, are exempt from the LOS D standard. The existing traffic volumes are shown in Figure 2. A summary of the intersection level of service calculations is contained in Table 2, and copies of the Level of Service calculations are provided in Appendix A.



Kottinger Drive Senior Housing Project Traffic Impact Analysis

City of Pleasanton

Figure 2

Existing Traffic Volumes

Table 2
Existing Peak Hour Intersection Levels of Service

Study Intersection ***Approach***	**Existing Conditions**			
	AM Peak		**PM Peak**	
	Delay	**LOS**	**Delay**	**LOS**
1. 1st St/Vineyard Ave-Ray St	20.5	C	28.5	C
2. 1st St/Kottinger Dr-Spring St	18.3	B	21.1	C
3. 1st St/Neal St	14.8	B	19.8	B
4. 1st St/Bernal Ave-Sunol Blvd*	33.8	C	**65.9**	**E**
5. Vineyard Ave/Adams Way	6.6	A	1.8	A
Northbound (Adams Ave) approach	*16.1*	*C*	*11.2*	*B*
6. Kottinger Dr/Adams Way-Mirador Dr	11.2	B	7.7	A
7. Stanley Blvd/Bernal Ave-Valley Ave	52.2	D	47.4	D
8. Bernal Ave/Vineyard Ave-Tawny Dr	17.4	B	10.7	B

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics;* **Bold** text = deficient operation; *According to the *City of Pleasanton General Plan*, Downtown intersections, including 1st Street/Bernal Avenue-Sunol Boulevard, are exempt from the LOS D standard.

Traffic Impact Fee Program

The City of Pleasanton has established a Traffic Impact Fee (TIF) program to fund future enhancements to the transportation network based on anticipated needs. As part of the City's program, there are plans to modify the following two intersections:

Stanley Boulevard/Bernal Avenue-Valley Avenue

The westbound Stanley Boulevard approach is to be converted to two left-turn lanes, two through lanes and a free right-turn lane. Additionally, the eastbound approach would be modified to provide two left-turn lanes, two through lanes and a shared through/right-turn lane. These improvements were included for the analysis of Existing plus Approved Projects and Cumulative Conditions scenarios.

1st Street/Bernal Avenue-Sunol Boulevard

The westbound Bernal Avenue approach is to be converted to two left-turn lanes, one through lane and a shared through/right-turn lane. Per the City's direction, this improvement was included for the analysis of only the Cumulative Conditions scenario.

Project Description

The project as proposed includes the development of up to 189 residential units for seniors located at 240 Kottinger Drive (Kottinger Place) and 251 Kottinger Drive (Pleasanton Gardens). Currently, the two project sites include 90 senior housing units (50 on the Kottinger Place site and 40 on the Pleasanton Gardens site) for seniors. The proposed project would demolish the existing units and build

up to 59 new units on the Pleasanton Gardens site and up to 130 units on the Kottinger Place site, for a net increase of 99 senior units. As part of the proposed project, the Regalia House site located at 4133 Regalia Court and a vacant parcel located at 4138 Vineyard Avenue would be incorporated into the new plan for Kottinger Place. The Kottinger Place project site would be accessed via three access points: two on Vineyard Avenue and one on Kottinger Drive, while the Pleasanton Gardens project site would be accessed via one access point on Kottinger Drive. The proposed concept site plan is shown in Figure 3.

Trip Generation

The anticipated trip generation for the proposed project was estimated using the fitted curve equations for Senior Adult Housing-Attached (ITE Trip Generation Land Use #252) published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual*, 9th Edition, 2012. Because the site is currently occupied by 90 housing units for seniors, the trip generation of the existing use was also considered.

The expected trip generation potential for the proposed project is indicated in Table 3, with deductions taken for existing trips at the site. The proposed project is expected to result in a net increase of 295 daily trips, including 20 a.m. peak hour trips and 24 p.m. peak hour trips.

Table 3
Trip Generation Summary

Land Use	Units	Daily		AM Peak Hour				PM Peak Hour			
		Rate	Trips	Rate	Trips	In	Out	Rate	Trips	In	Out
Proposed											
Senior Housing-Attached	189 du	3.0	584	0.20	38	13	25	0.25	47	25	22
Existing											
Senior Housing-Attached	-90 du	-3.0	-289	-0.20	-18	-6	-12	-0.26	-23	-13	-10
Total Net-New Trips			**295**		**20**	**7**	**13**		**24**	**12**	**12**

Note: du = dwelling unit

Trip Distribution

The trip distribution patterns used to allocate new project trips to the street network were determined by reviewing existing turning movements at the study intersections, location of the project site access points and traffic distribution patterns applied in a recently completed traffic study for 3150 Bernal Avenue. The applied distribution assumptions are shown in Table 4 and the resulting net new project traffic volumes are shown in Figure 4.

Source: MidPen Housing

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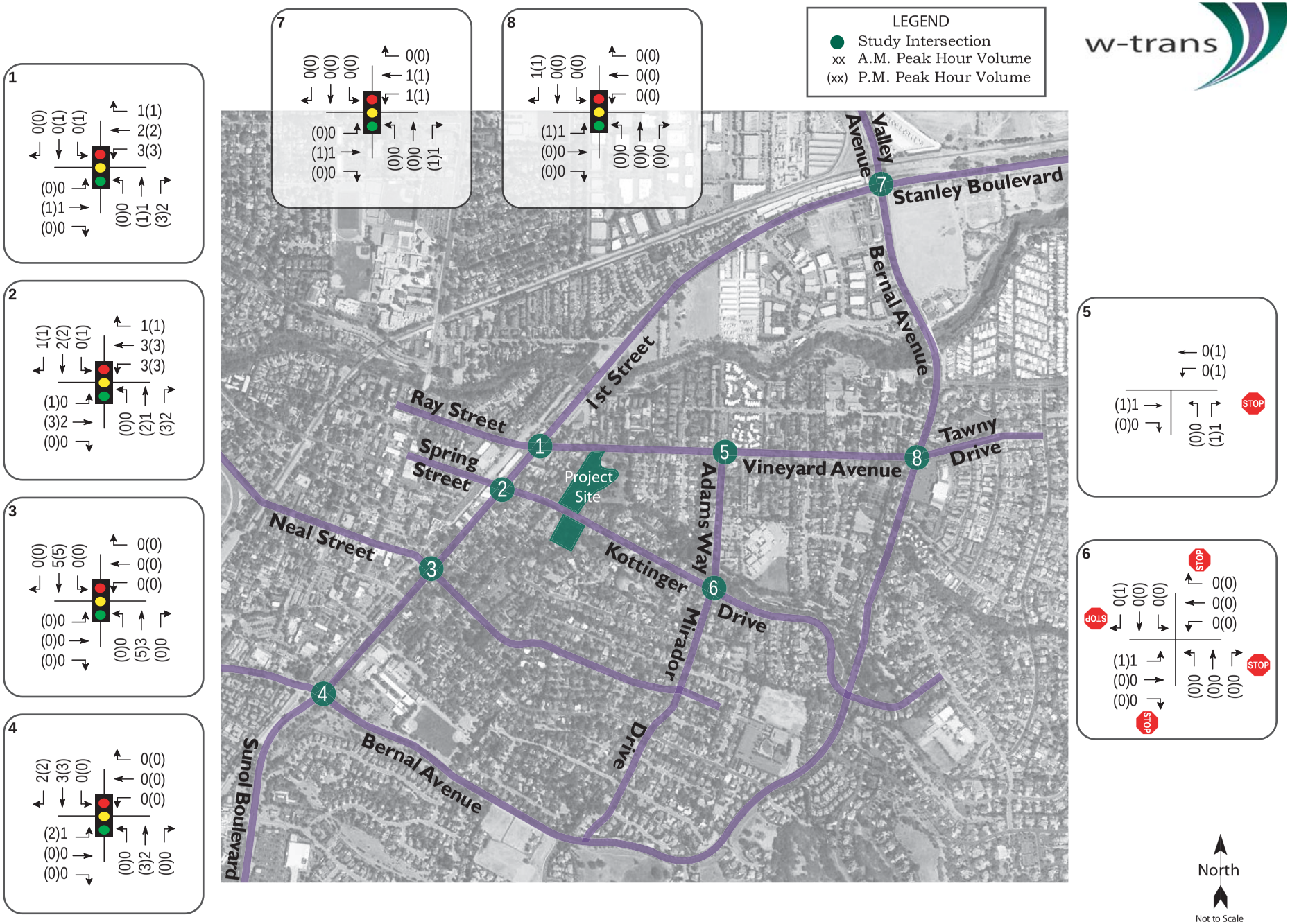
Kottinger Drive Senior Housing Project Traffic Impact Analysis

City of Pleasanton

Figure 3

Concept Plan



Kottinger Drive Senior Housing Project Traffic Impact Analysis

City of Pleasanton

Figure 4

Project Traffic Volumes

Table 4
Trip Distribution Assumptions

Route	Percent
Santa Rita Rd north of Vineyard Ave	30%
Hopyard Rd west of 1st St	10%
Sunol Blvd south of Bernal Ave	25%
Bernal Ave west of 1st St	15%
Stanley Blvd east of Bernal Ave	20%
TOTAL	**100%**

Existing plus Project Conditions

Upon the addition of project-related traffic to the Existing volumes, all of the study intersections but one are expected to operate acceptably at LOS D or better during both the a.m. and p.m. peak hours. The intersection of 1st Street/Bernal Avenue-Sunol Boulevard would continue to operate at an unacceptable LOS E during the p.m. peak hour. A summary of the intersection level of service analysis is provided in Table 5 and copies of the Level of Service calculations are provided in Appendix A.

Table 5
Existing and Existing plus Project Peak Hour Intersection Levels of Service

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. 1st St/Vineyard Ave-Ray St	20.5	C	28.5	C	20.6	C	28.7	C
2. 1st St/Kottinger Dr-Spring St	18.3	B	21.1	C	18.9	B	21.7	C
3. 1st St/Neal St	14.8	B	19.8	B	14.8	B	19.9	B
4. 1st St/Bernal Ave-Sunol Blvd*	33.8	C	**65.9**	**E**	33.9	C	**66.6**	**E**
5. Vineyard Ave/Adams Way	6.6	A	1.8	A	6.7	A	1.9	A
Northbound Adams Ave	*16.1*	*C*	*11.2*	*B*	*16.2*	*C*	*11.2*	*B*
6. Kottinger Dr/Adams Way-Mirador Dr	11.2	B	7.7	A	11.2	B	7.7	A
7. Stanley Blvd/Bernal Ave-Valley Ave	52.2	D	47.4	D	52.3	D	47.4	D
8. Bernal Ave/Vineyard Ave-Tawny Dr	17.4	B	10.7	B	17.5	B	10.7	B

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics*; **Bold** text = deficient operation; *According to the *City of Pleasanton General Plan*, Downtown intersections, including 1st Street/Bernal Avenue-Sunol Boulevard, are exempt from the LOS D standard

The intersection of 1st Street/Bernal Avenue-Sunol Boulevard currently operates at an unacceptable LOS E during the p.m. peak hour. With the addition of the proposed project, the intersection would continue to operate at an unacceptable LOS E. However, according to the *City of Pleasanton General*

Plan, Downtown intersections such as1st Street/Bernal Avenue-Sunol Boulevard are exempt from the LOS D standard unless the City determines that improvements necessary to maintain LOS D are consistent with the goals for the *Downtown Specific Plan.*

Finding: The study intersections are expected to continue operating at an acceptable level of service with the addition of project-generated traffic except for the intersection of 1st Street/Bernal Avenue-Sunol Boulevard which would continue to operate at an unacceptable LOS E. However, according to the *City of Pleasanton General Plan*, Downtown intersections such as 1st Street/Bernal Avenue-Sunol Boulevard are exempt from the LOS D standard.

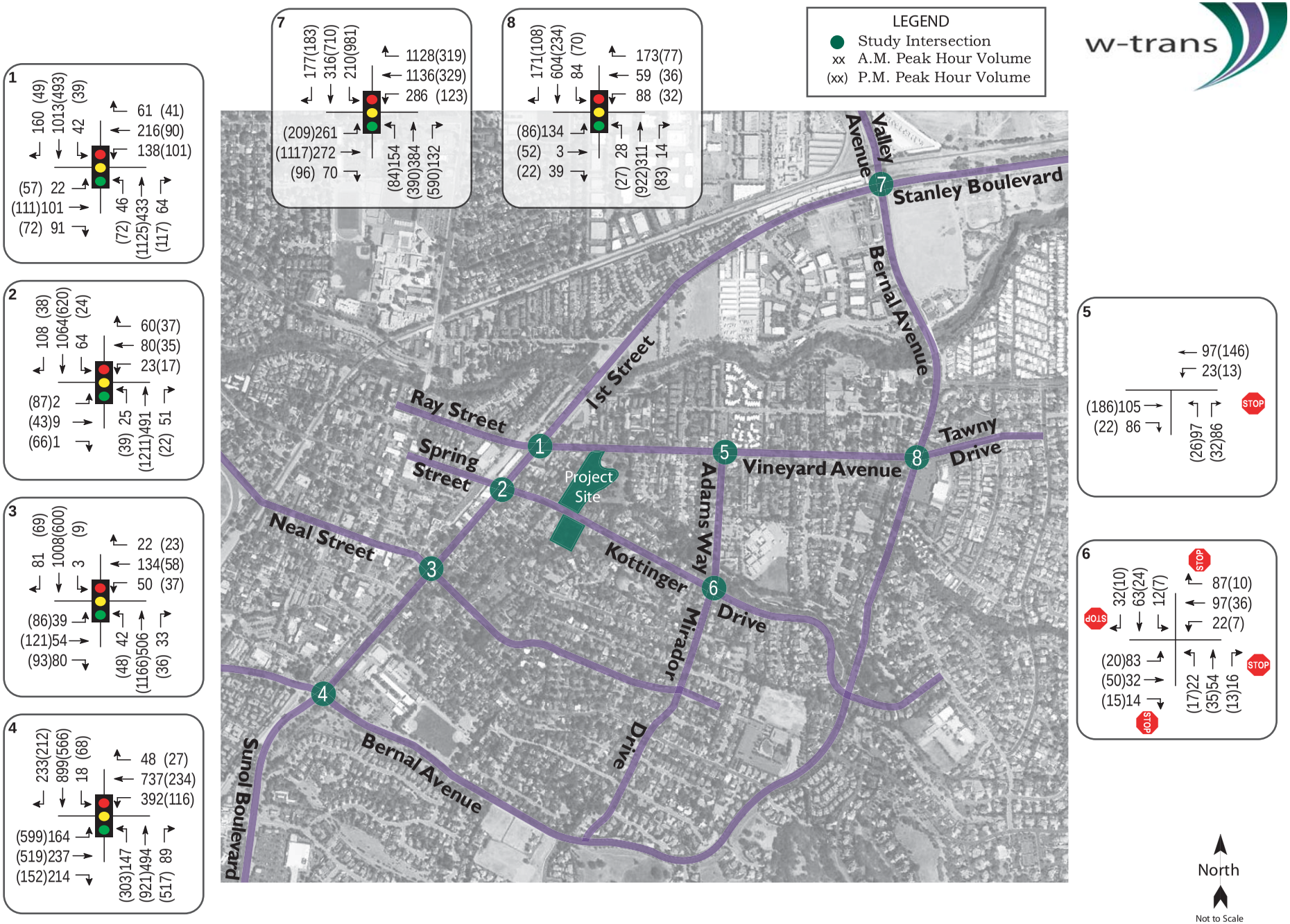
Existing plus Approved Projects Conditions

Existing plus Approved Projects operating conditions were determined with traffic that would be generated by all approved and pending projects, added to existing traffic volumes, including the City's Housing Element, as contained in the City's Synchro traffic model. It should be noted that the planned TIF improvements at the intersection of Stanley Boulevard/Bernal Avenue-Valley Avenue were included in this analysis. Under these conditions, all of the study intersections are expected to operate at an acceptable LOS D or better, except for the intersection of 1st Street/Bernal Avenue-Sunol Boulevard, which would operate at an unacceptable LOS E during the p.m. peak hour. These results are summarized in Table 6, and Existing plus Approved Projects volumes are shown in Figure 5.

Table 6
Existing plus Approved Projects Peak Hour Intersection Levels of Service

Study Intersection ***Approach***	**Existing Plus Approved Conditions**			
	AM Peak		**PM Peak**	
	Delay	**LOS**	**Delay**	**LOS**
1. 1st St/Vineyard Ave-Ray St	20.6	C	26.9	C
2. 1st St/Kottinger Dr-Spring St	34.0	C	34.1	C
3. 1st St/Neal St	17.5	B	34.2	C
4. 1st St/Bernal Ave-Sunol Blvd*	47.4	D	**79.6**	**E**
5. Vineyard Ave/Adams Way	6.6	A	1.8	A
Northbound Adams Ave	*16.7*	*C*	*11.2*	*B*
6. Kottinger Dr/Adams Way-Mirador Dr	11.5	B	7.8	A
7. Stanley Blvd/Bernal Ave-Valley Ave	27.0	C	29.4	C
8. Bernal Ave/Vineyard Ave-Tawny Dr	25.3	C	10.8	B

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics;* **Bold** text = deficient operation; *According to the *City of Pleasanton General Plan*, Downtown intersections, including 1st Street/Bernal Avenue-Sunol Boulevard, are exempt from the LOS D standard; Shaded cells = conditions with planned TIF improvements



Kottinger Drive Senior Housing Project Traffic Impact Analysis

Figure 5

City of Pleasanton

Existing plus Approved Projects Traffic Volumes

Existing plus Approved Projects plus Project Conditions

Upon the addition of project-related traffic added to Existing plus Approved Projects volumes, and the planned TIF improvements, all of the study intersections are anticipated to operate at an acceptable LOS D or better, except for the intersection of 1st Street/Bernal Avenue-Sunol Boulevard, which would deteriorate from LOS E to LOS F during the p.m. peak hour. However, according to the *City of Pleasanton General Plan*, Downtown intersections such as 1st Street/Bernal Avenue-Sunol Boulevard are exempt from the LOS D standard unless the City determines that improvements necessary to maintain LOS D are consistent with the goals for the *Downtown Specific Plan.* A summary of the intersection level of service analysis is provided in Table 7 and copies of the level of service calculations are provided in Appendix A.

Table 7
Existing plus Approved Projects plus Project Peak Hour Intersection Levels of Service

Study Intersection ***Approach***	**Without Project**				**With Project**			
	AM Peak		**PM Peak**		**AM Peak**		**PM Peak**	
	Delay	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**
1. 1st St/Vineyard Ave-Ray St	20.6	C	26.9	C	20.7	C	27.1	C
2. 1st St/Kottinger Dr-Spring St	34.0	C	34.1	C	35.2	D	36.0	D
3. 1st St/Neal St	17.5	B	34.2	C	17.5	B	34.8	C
4. 1st St/Bernal Ave-Sunol Blvd*	47.4	D	**79.6**	**E**	47.9	D	**80.4**	**F**
5. Vineyard Ave/Adams Way	6.6	A	1.8	A	6.7	A	1.8	A
Northbound Adams Ave	*16.7*	*C*	*11.2*	*B*	*16.8*	*C*	*11.2*	*B*
6. Kottinger Dr/Adams Way-Mirador Dr	11.5	B	7.8	A	11.5	B	7.8	A
7. Stanley Blvd/Bernal Ave-Valley Ave	27.0	C	29.4	C	27.0	C	29.4	C
8. Bernal Ave/Vineyard Ave-Tawny Dr	25.3	C	10.8	B	25.4	C	10.9	B

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics;* **Bold** text = deficient operation; *According to the *City of Pleasanton General Plan*, Downtown intersections, including 1st Street/Bernal Avenue-Sunol Boulevard, are exempt from the LOS D standard; Shaded cells = conditions with planned TIF improvements

Finding: With the addition of project-generated traffic, the study intersections are expected to continue operating at an acceptable level of service except for the intersection of 1st Street/Bernal Avenue-Sunol Boulevard which would deteriorate from LOS E to LOS F. However, according to the *City of Pleasanton General Plan*, Downtown intersections such as 1st Street/Bernal Avenue-Sunol Boulevard are exempt from the LOS D standard unless the City determines that improvements necessary to maintain LOS D are consistent with the goals for the *Downtown Specific Plan.*

Cumulative Conditions

Cumulative peak hour volume projections were taken from the build-out analysis contained in the *Pleasanton Housing Element Transportation Analysis*. This scenario represents cumulative traffic conditions

that would be expected upon build out of the land uses identified in the *General Plan,* including the updated Housing Element. It should be noted that the planned TIF improvements at the intersections of 1st Street/Bernal Avenue-Sunol Boulevard and Stanley Boulevard/Bernal Avenue-Valley Avenue were included in this analysis.

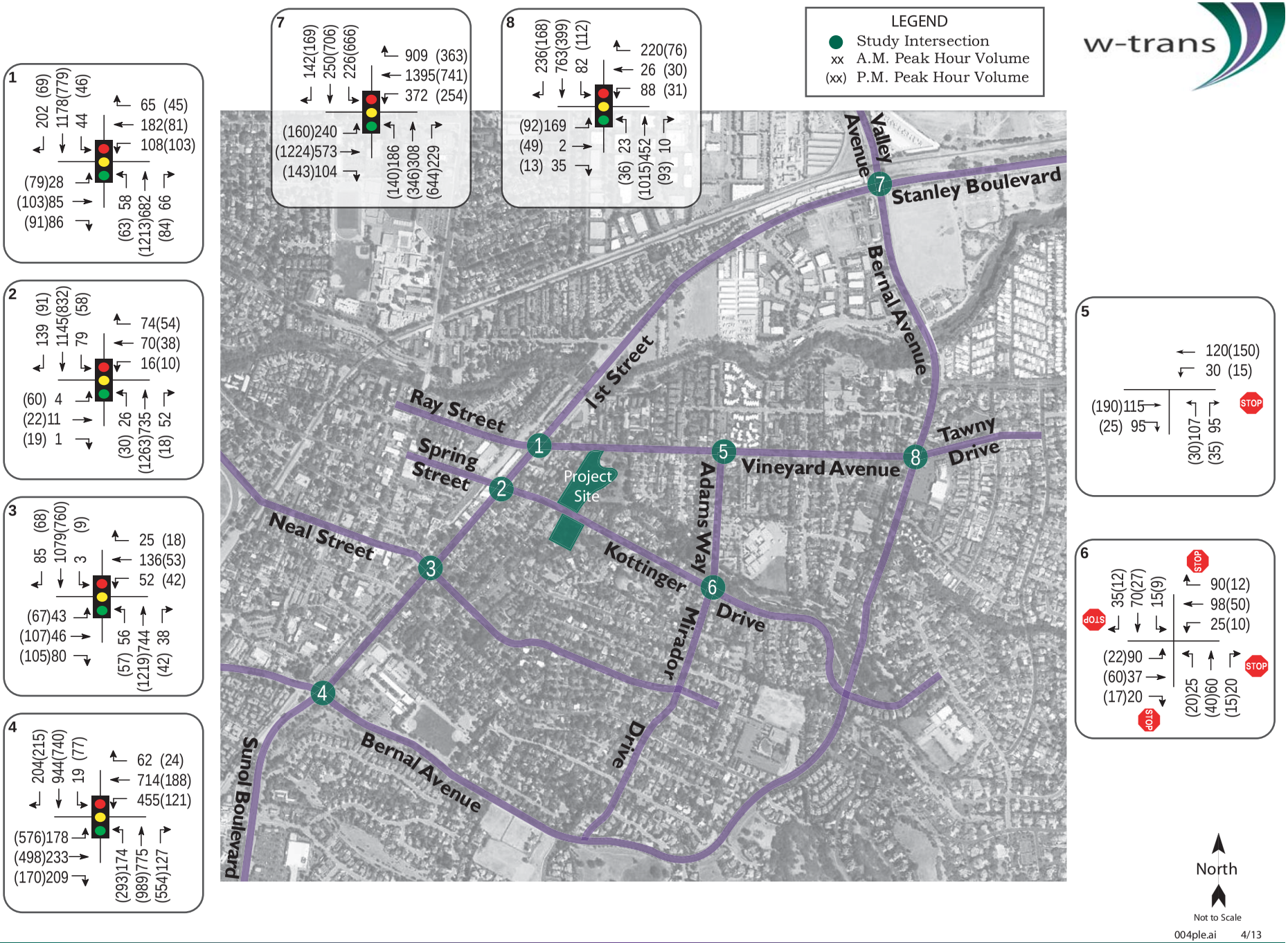
Under the anticipated Future volumes and considering the planned TIF improvements at the intersections of 1st Street/Bernal Avenue-Sunol Boulevard and Stanley Boulevard/Bernal Avenue-Valley Avenue, all of the study intersections but one are expected to operate at an acceptable LOS D or better. The intersection of 1st Street/Bernal Avenue-Sunol Boulevard is expected to operate at an unacceptable LOS E during the p.m. peak hour even after the implementation of the planned improvements. However, according to the *City of Pleasanton General Plan*, Downtown intersections such as 1st Street/Bernal Avenue-Sunol Boulevard are exempt from the LOS D standard unless the City determines that improvements necessary to maintain LOS D are consistent with the goals for the *Downtown Specific Plan.* Cumulative buildout volumes are shown in Figure 6 and operating conditions are summarized in Table 8.

Table 8
Cumulative Peak Hour Intersection Levels of Service

Study Intersection ***Approach***	**Cumulative Conditions**			
	AM Peak		**PM Peak**	
	Delay	**LOS**	**Delay**	**LOS**
1. 1st St/Vineyard Ave-Ray St	19.5	B	25.2	C
2. 1st St/Kottinger Dr-Spring St	48.7	D	22.1	C
3. 1st St/Neal St	19.2	B	39.5	D
4. 1st St/Bernal Ave-Sunol Blvd*	36.1	D	**76.6**	**E**
5. Vineyard Ave/Adams Way	7.9	A	2.0	A
Northbound Adams Ave	*20.5*	*C*	*11.4*	*B*
6. Kottinger Dr/Adams Way-Mirador Dr	12.6	B	8.0	A
7. Stanley Blvd/Bernal Ave-Valley Ave	31.2	C	32.4	C
8. Bernal Ave/Vineyard Ave-Tawny Dr	35.8	D	12.3	B

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics;* **Bold** text = deficient operation; *According to the *City of Pleasanton General Plan*, Downtown intersections, including 1st Street/Bernal Avenue-Sunol Boulevard, are exempt from the LOS D standard; Shaded cells = conditions with TIF planned improvements

It was noted that some intersections are expected to operate better under Cumulative conditions than they would under the Existing plus Approved Projects Conditions. This is attributed to the fact that the City is anticipating regional improvements that would increase capacity elsewhere, resulting in a shift in traffic patterns.



Kottinger Drive Senior Housing Project Traffic Impact Analysis

City of Pleasanton

Figure 6

Buildout Traffic Volumes

Cumulative plus Project Conditions

Upon the addition of project-generated traffic to the anticipated Cumulative volumes, the 1st Street Street/Bernal Avenue-Sunol Boulevard intersection is expected to continue operating at an unacceptable LOS E during the p.m. peak hour. As discussed previously, this intersection is exempt from the LOS D standard unless the City determines that improvements are necessary to maintain a LOS D standard. All of the remaining intersections would continue to operate at an acceptable LOS D or better with the addition of project generated traffic. A summary of the intersection level of service analysis is provided in Table 9 and copies of the level of service calculations are provided in Appendix A.

Table 9
Cumulative and Cumulative plus Project Peak Hour Intersection Levels of Service

Study Intersection ***Approach***	**Cumulative**				**Cumulative plus Project**			
	AM Peak		**PM Peak**		**AM Peak**		**PM Peak**	
	Delay	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**
1. 1st St/Vineyard Ave-Ray St	19.5	B	25.2	C	19.6	B	25.3	C
2. 1st St/Kottinger Dr-Spring St	48.7	D	22.1	C	49.8	D	23.5	C
3. 1st St/Neal St	19.2	B	39.5	D	19.5	B	40.1	D
4. 1st St/Bernal Ave-Sunol Blvd*	36.1	D	**76.6**	**E**	36.3	D	**77.4**	**E**
5. Vineyard Ave/Adams Way	7.9	A	2.0	A	7.9	A	2.0	A
Northbound Adams Ave	*20.5*	*C*	*11.4*	*B*	*20.6*	*C*	*11.5*	*B*
6. Kottinger Dr/Adams Way-Mirador Dr	12.6	B	8.0	A	12.6	B	8.0	A
7. Stanley Blvd/Bernal Ave-Valley Ave	31.2	C	32.4	C	31.2	C	32.4	C
8. Bernal Ave/Vineyard Ave-Tawny Dr	35.8	D	12.3	B	35.9	D	12.3	B

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics;* **Bold** text = deficient operation; *According to the *City of Pleasanton General Plan*, Downtown intersections, including 1st Street/Bernal Avenue-Sunol Boulevard, are exempt from the LOS D standard; Shaded cells = conditions with TIF planned improvements

Finding: Upon the addition of project-generated traffic, the study intersections are expected to operate at an acceptable level of service except for 1st Street/Bernal Avenue-Sunol Boulevard which would continue to operate at an unacceptable LOS E. However, according to the *City of Pleasanton General Plan*, Downtown intersections (1st Street/Bernal Avenue-Sunol Boulevard) are exempt from the LOS D standard unless the City determines that improvements necessary to maintain LOS D are consistent with the goals for the *Downtown Specific Plan.*

Queuing

Queuing analysis was performed of the study intersections of 1st Street/Vineyard Avenue-Ray Street and 1st Street/Kottinger Drive-Spring Street to determine if there would be adequate left-turn lane storage at these locations with the addition of project-generated traffic. Under the Existing plus Approved Projects Conditions and Cumulative Conditions, the queue lengths for left-turn pockets that would

potentially receive project-generated traffic were determined using the SIMTRAFFIC application of Synchro, and averaging the 95th percentile queues for each of five runs.

The 95th percentile queue lengths are summarized in Table 10. Copies of the SIMTRAFFIC projections are provided in Appendix B.

Table 10
95th Percentile Left-Turn Queues

Intersection ***movement***	**Available Storage**	**95th percentile Queues AM Peak Hour**				**95th percentile Queues PM Peak Hour**			
		E+A	**E+A+P**	**C**	**C+P**	**E+A**	**E+A+P**	**C**	**C+P**
1st St/Vineyard Ave-Ray St									
Southbound left-turn	125	*	*	*	*	50	91	119	93
Westbound left-turn	75	**120**	**128**	**118**	**122**	**101**	**101**	**95**	**111**
1st St/Kottinger Dr-Spring St									
Southbound left-turn	90	*	*	*	*	67	57	**120**	**100**

Notes: All distances are measured in feet; * = The project would not add traffic to these movements therefore, the queue length has not been reported; E+A = existing plus approved projects conditions, E+A+P = existing plus approved projects plus project conditions, C = cumulative conditions, C+P = cumulative plus project conditions; **Bold** text = queue length exceeds available storage

At the intersection of 1st Street/Vineyard Avenue-Ray Street, the 95th percentile queue for the westbound left-turn movement is expected to exceed the available storage length during both peak hours under the Existing plus Approved Project Conditions and Cumulative Conditions. With the addition of project-generated traffic, the queue length is expected to increase slightly but is not anticipated to result in an additional vehicle extending beyond the storage area assuming the typical size and spacing of vehicles in a turn lane to be in the range of 20 to 25 feet. During the p.m. peak hour, the southbound left-turn movement is expected to be accommodated within the available storage length under both scenarios. Further, with the addition of project-generated traffic, the queue length is expected to decrease slightly.

At the intersection of 1st Street/Kottinger Drive-Spring Street, the queue length for the southbound left-turn movement is expected to be accommodated within the available storage length under the Existing plus Approved Project Conditions without and with the addition of project generated trips during the p.m. peak hour. However, under Cumulative Conditions, the queue is anticipated to exceed the available storage length without and with the project.

It should be noted that with the addition of project-generated traffic, the queue lengths for the southbound left-turn movement at both of these study intersections would slightly decrease during the p.m. peak hour. The Southbound through queues would extend a significant distance in the through lane, blocking the left-turn pocket. Some of the project trips would not be able to enter the left-turn pocket due to the queuing in through lanes, which in turn would result in a decreased queue length in the left-turn pocket.

Findings: At the intersection of 1st Street/Vineyard Avenue-Ray Street, the westbound left-turn queue length is expected to exceed the available storage length under all scenarios without and with the addition of project-generated trips. During the p.m. peak hour, the southbound left-turn queue is expected to fit within the available storage length, without and with the project under both scenarios. The southbound left-turn queue at the 1st Street/Kottinger Drive-Spring Street intersection is expected to be accommodated within the available storage length under Existing plus Approved Projects Conditions, and exceed the storage length under Cumulative Conditions without and with the project. The increase in queue length due to the addition of the project-generated traffic would be less-than-significant.

Site Access and Parking

Site Access

Access to the Pleasanton Garden project site would be maintained through an existing driveway on Kottinger Drive. Access to the Kottinger Place project site would continue to be via two existing driveways (one on Kottinger Drive located west of the Pleasanton Garden driveway and the other on Vineyard Avenue) and one proposed full access driveway to be located on Vineyard Avenue approximately 100 feet west of the existing driveway. Internally, pathways would connect the building units to the parking areas and streets.

Sight Distance

At unsignalized intersections a substantially clear line of sight should be maintained between the driver of a vehicle waiting on the driveway and the driver of an approaching vehicle. Adequate time must be provided for the waiting vehicle to either cross, turn left, or turn right, without requiring the through traffic to radically alter their speed.

Sight distance along Vineyard Avenue for the proposed driveway at the Kottinger Place project site was evaluated based on sight distance criteria contained in the *Highway Design Manual* published by Caltrans. The recommended sight distance for minor-street approaches that are either a private road or a driveway are based on stopping sight distance with the approach travel speeds as the basis for determining the recommended sight distance.

Sight distance at the proposed project driveway was field measured. The posted speed limit on Vineyard Avenue is 25 miles per hour (mph). Based on a design speed of 25 mph, the minimum stopping sight distance needed is 150 feet. Vineyard Street is relatively flat and straight on either side of the project site; therefore, sight distance from the project driveway to the east and west would be adequate. However, it should be noted that on-street parking is permitted on the south side of Vineyard Street near the project vicinity. In order to have a clear line of sight for drivers exiting the proposed driveway and to avoid any potential conflicts between the existing and proposed driveways it is recommended that on-street parking be prohibited for 50 feet on either side of the proposed driveway and 50 feet west of the existing driveway. Additionally, periodic maintenance, including trimming of the vegetation on both sides of the project driveways on Kottinger Drive and Vineyard Avenue, should be undertaken to maintain clear sight lines.

Finding: Sight distance at the proposed project driveway on Vineyard Avenue would be adequate in either direction.

Recommendation: On-street parking should be prohibited on the south side of Vineyard Avenue for 50 feet on either side of the proposed driveway and 50 feet west of the existing driveway. Periodic maintenance, including trimming of the vegetation on both sides of the project driveways on Kottinger Drive and Vineyard Avenue, should be undertaken.

Parking

To ensure that the proposed project would provide adequate on-site parking, the City of Pleasanton Municipal Code (§ 18.88.030) was reviewed. However, the code does not specify parking requirements for a residential land use that includes senior housing such as the proposed project. Based on the information provided by the project team, parking for the existing use is provided at a rate of 0.8 spaces

per dwelling unit and is considered adequate for residents, visitors and other users. The proposed project would include up to 189 units, which would require 152 parking spaces based on the parking ratio demand for the existing use. The proposed project would provide 152 parking spaces including four visitor parking spaces and five disabled parking spaces. The proposed parking would adequately satisfy the projected demand.

Finding: The proposed152 parking spaces including four visitor parking spaces and five disabled parking spaces at the project site are expected to be adequate.

Alternative Modes

Pedestrian Facilities

Sidewalks currently exit on the project frontage along Kottinger Drive and Vineyard Avenue connecting the project site to the surrounding area. The project would create a separate pedestrian entrance to Pleasanton Gardens from Kottinger Drive to avoid pedestrian access through the parking lot and provide better connectivity between the two sites. It is anticipated that the existing and proposed pedestrian facilities would adequately serve the project site.

Finding: Existing and proposed pedestrian facilities would adequately serve the project site.

Bicycle Facilities

Due to the nature of the proposed project, bike oriented trips would be minimal. Existing bicycle facilities are expected to adequately serve the project site.

Finding: Bicycle facilities serving the project site are expected to be adequate.

Transit

The existing transit bus stops located on the project frontage at Kottinger Drive and Vineyard Avenue as well as on 1st Street are within acceptable walking distance of both sites. Pedestrian facilities that connect the project site to the bus stops are adequate. The existing transit and pedestrian facilities are anticipated to adequately accommodate the project-generated transit trips.

Finding: Existing transit route and bus stops adjacent to the project site are expected to be adequate.

Safety Analysis

Collision History

The collision histories for the study intersections were reviewed to determine any trends or patterns that may indicate a safety issue. Collision rates were calculated based on collision data available from the California Highway Patrol as published in their *Statewide Integrated Traffic Records System* (SWITRS) reports. A five-year period between July 1, 2006, and June 30, 2011, was used in the analysis. The calculated collision rates for the study intersections were compared to average collision rates for similar facilities statewide, as indicated in *2009 Accident Data on California State Highways*, Caltrans.

The study intersections of 1st Street/Neal Street, 1st Street/Bernal Avenue-Sunol Boulevard and Vineyard Avenue/Adams Way were determined to have collision rates higher than the statewide averages for similar facilities. All of the remaining intersections experienced collision rates lower than the statewide averages for similar facilities. No fatalities were reported during the five-year period studied, although the injury rate for all the signalized intersections was higher than the statewide average for similar facilities. It should be noted that at the study intersection of 1st Street/Neal Street, six collisions out of the 19 reported involved a pedestrian or a bicyclist.

The calculated collision rates are presented in Table 11 and details are provided in Appendix C.

Table 11
Collision Rates at the Study Intersections

Study Intersection	Number of Collisions	Calculated Collision Rate (c/mve)	Statewide Average Collision Rate (c/mve)
1. 1st St/Vineyard Ave-Ray St	6	0.15	0.36
2. 1st St/Kottinger Dr-Spring St	9	0.25	0.36
3. 1st St/Neal St	19	**0.51**	0.36
4. 1st St/Bernal Ave-Sunol Blvd	31	**0.47**	0.36
5. Vineyard Ave/Adams Way	3	**0.39**	0.15
6. Kottinger Dr/Adams Way-Mirador Dr	1	0.23	0.25
7. Stanley Blvd/Bernal Ave-Valley Ave	15	0.16	0.36
8. Bernal Ave/Vineyard Ave-Tawny Dr	8	0.28	0.36

Note: c/mve = collisions per million vehicles entering; **Bold text** indicates calculated collision rates higher than the statewide average

The collision data for the intersections with higher-than-average collision rates were further examined to determine any apparent trends in collision types. At the study intersections of 1st Street/Neal Street and 1st Street/Bernal Avenue-Sunol Boulevard, the majority of the collisions reported were rear-end type collisions, which is a common collision type for a signalized intersection on an arterial, especially where conditions are occasionally congested. The primary collision factor associated with the rear-end collision was "unsafe speed."

At the study intersection of Vineyard Avenue/Adams Way, three collisions were reported over the five-year period, but no trend in collision types was noticed. The higher collision rate at this intersection can be attributed to the low traffic volumes.

Although the calculated collision rates at the three intersections were determined to be higher than the statewide averages for similar facilities, this does not indicate a safety concern because the intersections selected to determine the statewide collision rates does not necessarily correlate to the local conditions at the study intersections due to various factors including intersection spacing, signal timing, geometric design, traffic volumes, adjacent land uses, and travel mode.

Finding: All of the study intersections except three were determined to have a collision rates lower than the statewide averages for similar facilities. The higher collision rate at the three study intersections does not indicate any safety concern.

Conclusions and Recommendations

Conclusions

The following summarizes the findings of this analysis.

Existing Conditions

- Currently the intersection of 1st Street/Bernal Avenue-Sunol Boulevard operates at an unacceptable LOS E during the p.m. peak hour, but all other study intersections operate acceptably.

- The City's Traffic Impact Fee (TIF) program includes planned improvements to Stanley Boulevard/ Bernal Avenue-Valley Avenue and 1st Street/Bernal Avenue-Sunol Boulevard intersections.

Project Conditions

- The proposed project is anticipated to generate an average of 295 net new vehicle trips on a daily basis, of which 20 would occur during the a.m. peak hour and 24 would occur during the p.m. peak hour.

Existing plus Project Conditions

- The study intersections are expected to continue operating at acceptable levels of service with the addition of project-generated traffic except for the intersection of 1st Street/Bernal Avenue-Sunol Boulevard which would continue to operate at an unacceptable LOS E during the p.m. peak hour. However, according to the *City of Pleasanton General Plan*, Downtown intersections such as 1st Street/Bernal Avenue-Sunol Boulevard are exempt from the LOS D standard unless the City determines that improvements necessary to maintain LOS D are consistent with the goals for the *Downtown Specific Plan.*

Existing plus Approved Projects Condition

- Under Existing plus Approved Projects Conditions and considering the planned improvements at the intersection of Stanley Boulevard/Bernal Avenue-Valley Avenue, the study intersections are expected to continue operating at acceptable levels of service except for the intersection of 1st Street/Bernal Avenue-Sunol Boulevard, which would continue to operate at an unacceptable LOS E during the p.m. peak hour.

- With the addition of project-generated traffic, the intersection of 1st Street/Bernal Avenue-Sunol Boulevard would deteriorate from an unacceptable LOS E to LOS F during the p.m. peak hour. However, according to the *City of Pleasanton General Plan*, this intersection is exempt from the LOS D standard unless the City determines that improvements necessary to maintain LOS D are consistent with the goals for the *Downtown Specific Plan.* All of the remaining intersections would operate acceptably.

- The westbound left-turn queue at the 1st Street/Vineyard Avenue-Ray Street is expected to extend beyond the storage area without and with the addition of project-generated trips during both peak hours. The slight increase in the queue length due to the addition of project-generated traffic would result in a less-than-significant impact. During the p.m. peak hour, the southbound left-turn queue is expected to be accommodated within the available storage length without and with the project.

- The southbound left-turn queue at the 1st Street/Kottinger Drive-Spring Street intersection is expected to be accommodated within the available storage length without or with the project during the p.m. peak hour.

Cumulative Scenario

- Under Cumulative without Project Conditions and considering the planned improvements at the intersections of Stanley Boulevard/Bernal Avenue-Valley Avenue and 1st Street/Bernal Avenue-Sunol Boulevard, the study intersections are anticipated to operate acceptably except for the intersection of 1st Street/of Bernal Avenue-Sunol Boulevard, which would operate at an unacceptable LOS E during the p.m. peak hour even with planned improvements.

- With the addition of project-generated traffic, all study intersections are expected to operate acceptably except for the intersection of 1st Street/Bernal Avenue-Sunol Boulevard, which would continue to operate at an unacceptable LOS E during the p.m. peak hour. However, according to the *City of Pleasanton General Plan*, Downtown intersections such as 1st Street/Bernal Avenue-Sunol Boulevard are exempt from the LOS D standard unless the City determines that improvements necessary to maintain LOS D are consistent with the goals for the *Downtown Specific Plan.*

- The westbound left-turn queue length at the intersection of 1st Street/Vineyard Avenue-Ray Street is expected to exceed the available storage length without and with the addition of project-generated trips during both peak hours. The slight increase in the queue length due to the addition of project-generated traffic would result in a less-than-significant impact. During the p.m. peak hour, the southbound left-turn queue is expected to be accommodated within the available storage length without and with the project.

- The southbound left-turn queue at the 1st Street/Kottinger Drive-Spring Street intersection is expected to exceed the storage length under Cumulative Conditions without and with the project. The slight increase in the queue length due to the addition of project-generated traffic would result in a less-than-significant impact.

Project Access/Parking

- The project site would be accessed via two existing driveways on Kottinger Drive as well as one existing and one new full access driveway on Vineyard Avenue.

- Parking would be provided at a rate of 0.8 spaces per one dwelling unit, resulting in 152 parking spaces. The proposed parking supply is expected to satisfy the projected parking demand.

Alternative Modes of Transportation

- Existing and proposed pedestrian facilities as well as existing bicycle facilities would adequately serve the project site.

- Existing transit route and bus stops adjacent to the project site on Kottinger Drive, Vineyard Avenue and 1st Street would adequately serve the project-generated transit trips.

Collision History

- For the five-year period of July 1, 2006, through June 30, 2011, the calculated collision rates for all study intersections except three were determined to be lower than the statewide average rates for

similar facilities. The higher collision rate at the three study intersections does not indicate any safety concern.

Recommendations

- It is recommended that on-street parking be prohibited for 50 feet on either side of the proposed driveway and 50 feet west of the existing driveway on Vineyard Avenue to maintain clear sight lines and reduce potential conflicts between the existing and proposed driveway.

- It is recommended that periodic maintenance, including trimming of the vegetation on both sides of the project driveways on Kottinger Drive and Vineyard Avenue, be undertaken to maintain clear sight lines.

Study Participants and References

Study Participants

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Technician/Graphics:	Deborah J. Mizell
Editing/Formatting:	Angela McCoy
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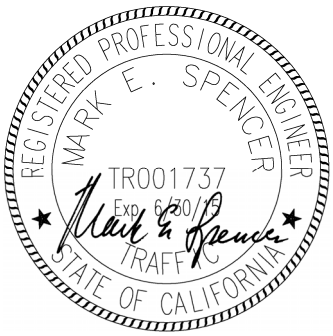

Appendix A

Intersection Level of Service Calculations

HCM Signalized Intersection Capacity Analysis
28: Stanley Blvd & Valley

4/17/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	204	195	44	185	836	1201	115	446	111	216	298	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.91	0.91	1.00	0.95	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	0.98	1.00	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.94	0.85	1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3547	3657	1591	3547	3241	1489	1829	3657	1599	3547	3469	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3547	3657	1591	3547	3241	1489	1829	3657	1599	3547	3469	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	224	214	48	203	919	1320	126	490	122	237	327	171
RTOR Reduction (vph)	0	0	28	0	87	198	0	0	0	0	74	0
Lane Group Flow (vph)	224	214	20	203	1452	502	126	490	122	237	424	0
Confl. Peds. (#/hr)			12			36			36			
Turn Type	Prot		Perm	Prot		Prot	Prot		Free	Prot		
Protected Phases	1	6		5	2	2	3	8		7	4	
Permitted Phases			6						Free			
Actuated Green, G (s)	10.3	37.0	37.0	10.2	36.9	36.9	10.8	19.8	100.0	12.0	21.0	
Effective Green, g (s)	11.3	41.0	41.0	11.2	40.9	40.9	11.8	22.8	100.0	13.0	24.0	
Actuated g/C Ratio	0.11	0.41	0.41	0.11	0.41	0.41	0.12	0.23	1.00	0.13	0.24	
Clearance Time (s)	4.0	7.0	7.0	4.0	7.0	7.0	4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	401	1499	652	397	1326	609	216	834	1599	461	833	
v/s Ratio Prot	c0.06	0.06		0.06	c0.45	0.34	c0.07	c0.13		0.07	0.12	
v/s Ratio Perm			0.01						c0.08			
v/c Ratio	0.56	0.14	0.03	0.51	1.10	0.82	0.58	0.59	0.08	0.51	0.51	
Uniform Delay, d1	42.0	18.5	17.6	41.8	29.6	26.3	41.8	34.4	0.0	40.6	32.9	
Progression Factor	1.01	0.90	1.14	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.7	0.2	0.1	1.1	55.0	12.0	4.0	1.1	0.1	1.0	0.5	
Delay (s)	44.1	16.8	20.2	42.9	84.5	38.4	45.7	35.5	0.1	41.5	33.4	
Level of Service	D	B	C	D	F	D	D	D	A	D	C	
Approach Delay (s)		29.7			67.8			31.4			36.0	
Approach LOS		C			E			C			D	

Intersection Summary			
HCM Average Control Delay	52.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
30: Vineyard-Tawny & Bernal

4/17/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	127	4	32	74	59	173	33	303	16	75	385	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			1.00	1.00	1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.94			1.00	0.85	1.00	0.99		1.00	0.96	
Flt Protected	0.95	0.97			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1477	1412			1592	1391	1829	3629		1829	1829	
Flt Permitted	0.95	0.97			0.97	1.00	0.21	1.00		0.51	1.00	
Satd. Flow (perm)	1477	1412			1592	1391	398	3629		973	1829	
Peak-hour factor, PHF	0.87	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	146	5	38	87	69	204	39	356	19	88	453	176
RTOR Reduction (vph)	0	26	0	0	0	110	0	4	0	0	14	0
Lane Group Flow (vph)	96	67	0	0	156	94	39	371	0	88	615	0
Confl. Peds. (#/hr)			3	3			4					4
Parking (#/hr)	10	10	10	10	10	10						
Turn Type	Split			Split		Perm	Perm			Perm		
Protected Phases	4	4		3	3			2			6	
Permitted Phases						3	2			6		
Actuated Green, G (s)	9.9	9.9			13.0	13.0	29.6	29.6		29.6	29.6	
Effective Green, g (s)	11.9	11.9			15.0	15.0	31.6	31.6		31.6	31.6	
Actuated g/C Ratio	0.18	0.18			0.22	0.22	0.47	0.47		0.47	0.47	
Clearance Time (s)	5.0	5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	260	249			354	309	186	1699		456	856	
v/s Ratio Prot	c0.07	0.05			c0.10			0.10			c0.34	
v/s Ratio Perm						0.07	0.10			0.09		
v/c Ratio	0.37	0.27			0.44	0.31	0.21	0.22		0.19	0.72	
Uniform Delay, d1	24.5	24.0			22.6	21.9	10.6	10.6		10.5	14.4	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	0.6			0.9	0.6	0.6	0.1		0.2	2.9	
Delay (s)	25.4	24.6			23.5	22.5	11.1	10.7		10.7	17.3	
Level of Service	C	C			C	C	B	B		B	B	
Approach Delay (s)		25.0			22.9			10.7			16.5	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	67.5	Sum of lost time (s)	9.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
93: Vineyard-Ray St & First

4/17/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	107	87	134	224	59	43	369	61	38	813	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1829	1925	1614	1554	1636	1372	1829	3550		1829	3657	1577
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1829	1925	1614	1554	1636	1372	1829	3550		1829	3657	1577
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	23	119	97	149	249	66	48	410	68	42	903	153
RTOR Reduction (vph)	0	0	83	0	0	26	0	10	0	0	0	80
Lane Group Flow (vph)	23	119	14	149	249	40	48	468	0	42	903	73
Confl. Peds. (#/hr)			1			1			9			4
Parking (#/hr)				10	10	10						
Turn Type	Split		Perm	Split		Perm	Prot			Prot		Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases			4			3						2
Actuated Green, G (s)	13.3	13.3	13.3	18.9	18.9	18.9	5.2	45.7		5.1	45.6	45.6
Effective Green, g (s)	14.3	14.3	14.3	19.9	19.9	19.9	6.2	47.7		6.1	47.6	47.6
Actuated g/C Ratio	0.14	0.14	0.14	0.20	0.20	0.20	0.06	0.48		0.06	0.48	0.48
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	262	275	231	309	326	273	113	1693		112	1741	751
v/s Ratio Prot	0.01	c0.06		0.10	c0.15		c0.03	0.13		0.02	c0.25	
v/s Ratio Perm			0.01			0.03						0.05
v/c Ratio	0.09	0.43	0.06	0.48	0.76	0.15	0.42	0.28		0.38	0.52	0.10
Uniform Delay, d1	37.2	39.1	37.0	35.5	37.8	33.1	45.2	15.8		45.1	18.2	14.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.37	0.70		1.51	0.37	0.11
Incremental Delay, d2	0.1	1.1	0.1	1.2	10.2	0.3	2.4	0.4		1.9	1.0	0.2
Delay (s)	37.3	40.2	37.1	36.7	48.0	33.3	64.2	11.4		69.9	7.8	1.9
Level of Service	D	D	D	D	D	C	E	B		E	A	A
Approach Delay (s)		38.7			42.3			16.2			9.4	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM Average Control Delay	20.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
94: Kottinger-Spring & First

4/17/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	13	44	11	26	74	51	23	419	37	35	919	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00	0.93	1.00	0.99		1.00	0.99	
Flpb, ped/bikes		0.99			0.99	1.00	1.00	1.00		0.96	1.00	
Frt		0.98			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1549			1592	1292	1554	1600		1487	1603	
Flt Permitted		0.94			0.93	1.00	0.18	1.00		0.45	1.00	
Satd. Flow (perm)		1471			1500	1292	290	1600		705	1603	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	14	48	12	29	81	56	25	460	41	38	1010	84
RTOR Reduction (vph)	0	9	0	0	0	48	0	2	0	0	2	0
Lane Group Flow (vph)	0	65	0	0	110	8	25	499	0	38	1092	0
Confl. Peds. (#/hr)	36		24	24		36	36		36	36		36
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		13.3			13.3	13.3	78.7	78.7		78.7	78.7	
Effective Green, g (s)		14.3			14.3	14.3	79.7	79.7		79.7	79.7	
Actuated g/C Ratio		0.14			0.14	0.14	0.80	0.80		0.80	0.80	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		210			215	185	231	1275		562	1278	
v/s Ratio Prot								0.31			c0.68	
v/s Ratio Perm		0.04			c0.07	0.01	0.09			0.05		
v/c Ratio		0.31			0.51	0.04	0.11	0.39		0.07	0.85	
Uniform Delay, d1		38.4			39.6	37.0	2.3	3.0		2.2	6.5	
Progression Factor		1.00			1.00	1.00	1.62	1.81		0.62	2.06	
Incremental Delay, d2		0.9			2.1	0.1	0.9	0.9		0.2	6.7	
Delay (s)		39.3			41.7	37.0	4.6	6.3		1.6	20.0	
Level of Service		D			D	D	A	A		A	C	
Approach Delay (s)		39.3			40.1			6.2			19.4	
Approach LOS		D			D			A			B	

Intersection Summary			
HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
95: Neal St & First

4/17/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	55	67	43	114	24	28	416	27	4	881	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	0.92		1.00	0.97		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1537	1472		1536	1584		1554	1618		1543	1613	
Flt Permitted	0.47	1.00		0.51	1.00		0.21	1.00		0.47	1.00	
Satd. Flow (perm)	754	1472		829	1584		347	1618		761	1613	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	43	58	71	45	120	25	29	438	28	4	927	75
RTOR Reduction (vph)	0	55	0	0	9	0	0	1	0	0	2	0
Lane Group Flow (vph)	43	74	0	45	136	0	29	465	0	4	1000	0
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	13.9	13.9		13.9	13.9		78.1	78.1		78.1	78.1	
Effective Green, g (s)	14.9	14.9		14.9	14.9		79.1	79.1		79.1	79.1	
Actuated g/C Ratio	0.15	0.15		0.15	0.15		0.79	0.79		0.79	0.79	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	112	219		124	236		274	1280		602	1276	
v/s Ratio Prot		0.05			c0.09			0.29			c0.62	
v/s Ratio Perm	0.06			0.05			0.08			0.01		
v/c Ratio	0.38	0.34		0.36	0.57		0.11	0.36		0.01	0.78	
Uniform Delay, d1	38.4	38.1		38.3	39.6		2.4	3.1		2.2	5.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.86	1.43	
Incremental Delay, d2	2.2	0.9		1.8	3.4		0.8	0.8		0.0	2.6	
Delay (s)	40.6	39.0		40.1	43.0		3.2	3.9		1.9	10.8	
Level of Service	D	D		D	D		A	A		A	B	
Approach Delay (s)		39.4			42.3			3.8			10.8	
Approach LOS		D			D			A			B	

Intersection Summary			
HCM Average Control Delay	14.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
96: Bernal & First St

4/17/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	149	260	195	275	653	34	128	339	74	18	733	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95		0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.89	1.00	1.00		1.00	1.00	0.82	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3547	3657	1452	1829	3624		3547	1925	1345	1554	3223	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3547	3657	1452	1829	3624		3547	1925	1345	1554	3223	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	164	286	214	302	718	37	141	373	81	20	805	264
RTOR Reduction (vph)	0	0	177	0	4	0	0	0	45	0	27	0
Lane Group Flow (vph)	164	286	37	302	751	0	141	373	36	20	1042	0
Confl. Peds. (#/hr)			72			12			96			24
Parking (#/hr)										10	10	10
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases		4	4						2			
Actuated Green, G (s)	9.9	15.3	15.3	20.8	26.2		8.9	42.6	42.6	3.3	37.0	
Effective Green, g (s)	10.9	17.3	17.3	21.8	28.2		9.9	44.6	44.6	4.3	39.0	
Actuated g/C Ratio	0.11	0.17	0.17	0.22	0.28		0.10	0.45	0.45	0.04	0.39	
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0	5.0	4.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	387	633	251	399	1022		351	859	600	67	1257	
v/s Ratio Prot	0.05	c0.08		0.17	c0.21		c0.04	0.19		0.01	c0.32	
v/s Ratio Perm			0.03						0.03			
v/c Ratio	0.42	0.45	0.15	0.76	0.73		0.40	0.43	0.06	0.30	0.83	
Uniform Delay, d1	41.6	37.1	35.1	36.6	32.5		42.3	19.0	15.8	46.4	27.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.89	0.76	0.83	1.00	1.00	
Incremental Delay, d2	0.8	0.5	0.3	8.0	2.8		0.8	1.6	0.2	2.5	6.4	
Delay (s)	42.4	37.6	35.4	44.6	35.3		38.4	16.1	13.3	48.9	33.9	
Level of Service	D	D	D	D	D		D	B	B	D	C	
Approach Delay (s)		38.1			37.9			21.0			34.2	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	33.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
595: Vineyard & Adams

4/17/2013

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	99	86	23	84	97	86
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.64	0.64	0.64	0.64	0.64	0.64
Hourly flow rate (vph)	155	134	36	131	152	134
Pedestrians	20			20	20	
Lane Width (ft)	13.0			13.0	13.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	2			2	2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			309		465	262
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			309		465	262
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		71	82
cM capacity (veh/h)			1229		520	749

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	289	167	286
Volume Left	0	36	152
Volume Right	134	0	134
cSH	1700	1229	607
Volume to Capacity	0.17	0.03	0.47
Queue Length 95th (ft)	0	2	63
Control Delay (s)	0.0	1.9	16.1
Lane LOS		A	C
Approach Delay (s)	0.0	1.9	16.1
Approach LOS			C

Intersection Summary			
Average Delay		6.6	
Intersection Capacity Utilization		40.4%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
597: Kottinger & Adams

4/17/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	83	27	14	22	88	87	22	54	16	12	63	32
Peak Hour Factor	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Hourly flow rate (vph)	138	45	23	37	147	145	37	90	27	20	105	53

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	207	328	153	178
Volume Left (vph)	138	37	37	20
Volume Right (vph)	23	145	27	53
Hadj (s)	0.10	-0.18	-0.02	-0.12
Departure Headway (s)	5.4	5.0	5.6	5.5
Degree Utilization, x	0.31	0.46	0.24	0.27
Capacity (veh/h)	609	677	569	590
Control Delay (s)	10.9	12.1	10.4	10.5
Approach Delay (s)	10.9	12.1	10.4	10.5
Approach LOS	B	B	B	B

Intersection Summary			
Delay		11.2	
HCM Level of Service		B	
Intersection Capacity Utilization		44.1%	ICU Level of Service A
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis
28: Stanley Blvd & Valley

4/17/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	171	1144	89	119	263	302	62	343	538	1158	796	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.91	0.91	1.00	0.95	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	0.99	1.00	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.95	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3547	3657	1586	3547	3285	1489	1829	3657	1599	3547	3582	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3547	3657	1586	3547	3285	1489	1829	3657	1599	3547	3582	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	182	1217	95	127	280	321	66	365	572	1232	847	134
RTOR Reduction (vph)	0	0	61	0	41	123	0	0	0	0	9	0
Lane Group Flow (vph)	182	1217	34	127	374	63	66	365	572	1232	972	0
Confl. Peds. (#/hr)			12			36			36			
Turn Type	Prot		Perm	Prot		Prot	Prot		Free	Prot		
Protected Phases	1	6		5	2	2	3	8		7	4	
Permitted Phases			6						Free			
Actuated Green, G (s)	11.5	38.6	38.6	9.4	36.5	36.5	8.5	14.6	120.0	36.4	42.5	
Effective Green, g (s)	12.5	42.6	42.6	10.4	40.5	40.5	9.5	17.6	120.0	37.4	45.5	
Actuated g/C Ratio	0.10	0.36	0.36	0.09	0.34	0.34	0.08	0.15	1.00	0.31	0.38	
Clearance Time (s)	4.0	7.0	7.0	4.0	7.0	7.0	4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	369	1298	563	307	1109	503	145	536	1599	1105	1358	
v/s Ratio Prot	c0.05	c0.33		0.04	0.11	0.04	0.04	c0.10		c0.35	0.27	
v/s Ratio Perm			0.02						c0.36			
v/c Ratio	0.49	0.94	0.06	0.41	0.34	0.12	0.46	0.68	0.36	1.11	0.72	
Uniform Delay, d1	50.8	37.4	25.5	51.9	29.7	27.5	52.8	48.5	0.0	41.3	31.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.75	0.66	
Incremental Delay, d2	1.0	13.9	0.2	0.9	0.2	0.1	2.3	3.6	0.6	61.9	1.4	
Delay (s)	51.8	51.3	25.7	52.8	29.9	27.6	55.0	52.1	0.6	92.8	22.3	
Level of Service	D	D	C	D	C	C	E	D	A	F	C	
Approach Delay (s)		49.8			33.3			22.9			61.5	
Approach LOS		D			C			C			E	

Intersection Summary			
HCM Average Control Delay	47.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	94.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
30: Vineyard-Tawny & Bernal

4/17/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	134	51	21	29	29	65	23	794	58	52	225	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	1.00	
Frpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.97			1.00	0.85	1.00	0.99		1.00	0.95	
Flt Protected	0.95	0.99			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1477	1480			1596	1391	1822	3620		1829	1824	
Flt Permitted	0.95	0.99			0.98	1.00	0.48	1.00		0.23	1.00	
Satd. Flow (perm)	1477	1480			1596	1391	922	3620		434	1824	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	140	53	22	30	30	68	24	827	60	54	234	101
RTOR Reduction (vph)	0	17	0	0	0	58	0	8	0	0	23	0
Lane Group Flow (vph)	108	90	0	0	60	10	24	879	0	54	312	0
Confl. Peds. (#/hr)			3	3			4					4
Parking (#/hr)	10	10	10	10	10	10						
Turn Type	Split			Split		Perm	Perm			Perm		
Protected Phases	4	4		3	3			2			6	
Permitted Phases						3	2			6		
Actuated Green, G (s)	7.7	7.7			4.2	4.2	17.3	17.3		17.3	17.3	
Effective Green, g (s)	9.7	9.7			6.2	6.2	19.3	19.3		19.3	19.3	
Actuated g/C Ratio	0.22	0.22			0.14	0.14	0.44	0.44		0.44	0.44	
Clearance Time (s)	5.0	5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	324	325			224	195	403	1581		190	796	
v/s Ratio Prot	c0.07	0.06			c0.04			c0.24			0.17	
v/s Ratio Perm						0.01	0.03			0.12		
v/c Ratio	0.33	0.28			0.27	0.05	0.06	0.56		0.28	0.39	
Uniform Delay, d1	14.5	14.3			17.0	16.4	7.2	9.3		8.0	8.5	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	0.5			0.6	0.1	0.1	0.4		0.8	0.3	
Delay (s)	15.1	14.8			17.6	16.6	7.3	9.7		8.8	8.8	
Level of Service	B	B			B	B	A	A		A	A	
Approach Delay (s)		15.0			17.1			9.6			8.8	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	10.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	44.2	Sum of lost time (s)	9.0
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
93: Vineyard-Ray St & First

4/17/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	63	163	77	92	92	38	68	956	133	49	444	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1829	1925	1613	1554	1636	1371	1829	3562		1829	3657	1571
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1829	1925	1613	1554	1636	1371	1829	3562		1829	3657	1571
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	64	166	79	94	94	39	69	976	136	50	453	51
RTOR Reduction (vph)	0	0	40	0	0	34	0	6	0	0	0	22
Lane Group Flow (vph)	64	166	39	94	94	5	69	1106	0	50	453	29
Confl. Peds. (#/hr)			1			1			9			4
Parking (#/hr)				10	10	10						
Turn Type	Split		Perm	Split		Perm	Prot			Prot		Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases			4			3						2
Actuated Green, G (s)	15.8	15.8	15.8	13.7	13.7	13.7	7.2	66.7		6.8	66.3	66.3
Effective Green, g (s)	16.8	16.8	16.8	14.7	14.7	14.7	8.2	68.7		7.8	68.3	68.3
Actuated g/C Ratio	0.14	0.14	0.14	0.12	0.12	0.12	0.07	0.57		0.06	0.57	0.57
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	256	270	226	190	200	168	125	2039		119	2081	894
v/s Ratio Prot	0.03	c0.09		c0.06	0.06		0.04	c0.31		c0.03	0.12	
v/s Ratio Perm			0.02			0.00						0.02
v/c Ratio	0.25	0.61	0.17	0.49	0.47	0.03	0.55	0.54		0.42	0.22	0.03
Uniform Delay, d1	46.0	48.6	45.5	49.2	49.0	46.4	54.1	15.9		53.9	12.7	11.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.12	1.34		1.00	1.00	1.00
Incremental Delay, d2	0.5	4.1	0.4	2.0	1.7	0.1	2.8	0.5		2.4	0.2	0.1
Delay (s)	46.5	52.7	45.8	51.2	50.8	46.4	63.6	21.8		56.3	13.0	11.4
Level of Service	D	D	D	D	D	D	E	C		E	B	B
Approach Delay (s)		49.6			50.2			24.2			16.7	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM Average Control Delay	28.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
94: Kottinger-Spring & First

4/17/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	81	36	47	14	30	39	28	1058	18	26	564	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.97			1.00	0.92	1.00	1.00		1.00	0.99	
Flpb, ped/bikes		0.97			0.99	1.00	0.96	1.00		1.00	1.00	
Frt		0.96			1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		0.98			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1442			1590	1276	1499	1628		1554	1607	
Flt Permitted		0.83			0.91	1.00	0.38	1.00		0.16	1.00	
Satd. Flow (perm)		1222			1471	1276	599	1628		254	1607	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	84	37	48	14	31	40	29	1091	19	27	581	38
RTOR Reduction (vph)	0	12	0	0	0	33	0	0	0	0	2	0
Lane Group Flow (vph)	0	157	0	0	45	7	29	1110	0	27	617	0
Confl. Peds. (#/hr)	36		24	24		36	36		36	36		36
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		19.7			19.7	19.7	92.3	92.3		92.3	92.3	
Effective Green, g (s)		20.7			20.7	20.7	93.3	93.3		93.3	93.3	
Actuated g/C Ratio		0.17			0.17	0.17	0.78	0.78		0.78	0.78	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		211			254	220	466	1266		197	1249	
v/s Ratio Prot								c0.68			0.38	
v/s Ratio Perm		c0.13			0.03	0.01	0.05			0.11		
v/c Ratio		0.74			0.18	0.03	0.06	0.88		0.14	0.49	
Uniform Delay, d1		47.1			42.4	41.3	3.1	9.3		3.3	4.8	
Progression Factor		1.00			1.00	1.00	0.74	1.36		2.33	2.63	
Incremental Delay, d2		13.1			0.3	0.1	0.2	5.5		1.4	1.4	
Delay (s)		60.3			42.7	41.4	2.5	18.2		9.2	14.1	
Level of Service		E			D	D	A	B		A	B	
Approach Delay (s)		60.3			42.1			17.8			13.9	
Approach LOS		E			D			B			B	

Intersection Summary			
HCM Average Control Delay	21.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	91.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
95: Neal St & First

4/17/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	97	79	34	58	25	38	991	25	8	524	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.98	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.96		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1530	1500		1538	1545		1546	1629		1554	1602	
Flt Permitted	0.62	1.00		0.35	1.00		0.38	1.00		0.18	1.00	
Satd. Flow (perm)	1000	1500		563	1545		626	1629		300	1602	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	89	102	83	36	61	26	40	1043	26	8	552	68
RTOR Reduction (vph)	0	26	0	0	13	0	0	1	0	0	3	0
Lane Group Flow (vph)	89	159	0	36	74	0	40	1068	0	8	617	0
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	17.8	17.8		17.8	17.8		94.2	94.2		94.2	94.2	
Effective Green, g (s)	18.8	18.8		18.8	18.8		95.2	95.2		95.2	95.2	
Actuated g/C Ratio	0.16	0.16		0.16	0.16		0.79	0.79		0.79	0.79	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	157	235		88	242		497	1292		238	1271	
v/s Ratio Prot		c0.11			0.05			c0.66			0.39	
v/s Ratio Perm	0.09			0.06			0.06			0.03		
v/c Ratio	0.57	0.68		0.41	0.30		0.08	0.83		0.03	0.49	
Uniform Delay, d1	46.8	47.7		45.6	44.8		2.7	7.5		2.6	4.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		2.10	2.42	
Incremental Delay, d2	4.6	7.5		3.1	0.7		0.3	6.2		0.2	1.2	
Delay (s)	51.5	55.2		48.7	45.5		3.1	13.6		5.8	11.3	
Level of Service	D	E		D	D		A	B		A	B	
Approach Delay (s)		54.0			46.4			13.2			11.2	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	78.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
96: Bernal & First St

4/17/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	667	510	112	93	231	33	194	723	358	70	431	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95		0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.87	1.00	1.00		1.00	1.00	0.79	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3547	3657	1419	1829	3572		3547	1925	1291	1554	3173	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3547	3657	1419	1829	3572		3547	1925	1291	1554	3173	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	855	654	144	119	296	42	249	927	459	90	553	256
RTOR Reduction (vph)	0	0	88	0	9	0	0	0	153	0	43	0
Lane Group Flow (vph)	855	654	56	119	329	0	249	927	306	90	766	0
Confl. Peds. (#/hr)			72			12			96			24
Parking (#/hr)										10	10	10
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases		4	4						2			
Actuated Green, G (s)	22.2	25.7	25.7	12.7	16.2		19.0	53.5	53.5	10.1	44.6	
Effective Green, g (s)	23.2	27.7	27.7	13.7	18.2		20.0	55.5	55.5	11.1	46.6	
Actuated g/C Ratio	0.19	0.23	0.23	0.11	0.15		0.17	0.46	0.46	0.09	0.39	
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0	5.0	4.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	686	844	328	209	542		591	890	597	144	1232	
v/s Ratio Prot	c0.24	0.18		0.07	c0.09		0.07	c0.48		0.06	c0.24	
v/s Ratio Perm			0.04						0.24			
v/c Ratio	1.25	0.77	0.17	0.57	0.61		0.42	1.04	0.51	0.62	0.62	
Uniform Delay, d1	48.4	43.2	36.9	50.4	47.6		44.8	32.2	22.7	52.4	29.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.71	0.61	0.33	1.00	1.00	
Incremental Delay, d2	122.8	4.5	0.2	3.5	1.9		0.5	40.4	2.9	8.2	2.4	
Delay (s)	171.2	47.7	37.2	53.9	49.5		32.2	60.3	10.4	60.6	32.0	
Level of Service	F	D	D	D	D		C	E	B	E	C	
Approach Delay (s)		110.7			50.6			42.0			34.8	
Approach LOS		F			D			D			C	

Intersection Summary			
HCM Average Control Delay	65.9	HCM Level of Service	E
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
595: Vineyard & Adams

4/17/2013

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	186	22	13	136	26	32
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	204	24	14	149	29	35
Pedestrians	20			20	20	
Lane Width (ft)	13.0			13.0	13.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	2			2	2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			249		435	256
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			249		435	256
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		95	95
cM capacity (veh/h)			1293		552	754

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	229	164	64
Volume Left	0	14	29
Volume Right	24	0	35
cSH	1700	1293	648
Volume to Capacity	0.13	0.01	0.10
Queue Length 95th (ft)	0	1	8
Control Delay (s)	0.0	0.8	11.2
Lane LOS		A	B
Approach Delay (s)	0.0	0.8	11.2
Approach LOS			B

Intersection Summary			
Average Delay		1.8	
Intersection Capacity Utilization		33.4%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
597: Kottinger & Adams

4/17/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	20	47	15	7	34	10	17	35	13	7	24	10
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	25	58	19	9	42	12	21	43	16	9	30	12

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	101	63	80	51
Volume Left (vph)	25	9	21	9
Volume Right (vph)	19	12	16	12
Hadj (s)	-0.01	-0.06	0.00	-0.08
Departure Headway (s)	4.3	4.3	4.3	4.3
Degree Utilization, x	0.12	0.07	0.10	0.06
Capacity (veh/h)	815	814	793	803
Control Delay (s)	7.8	7.6	7.8	7.6
Approach Delay (s)	7.8	7.6	7.8	7.6
Approach LOS	A	A	A	A

Intersection Summary			
Delay		7.7	
HCM Level of Service		A	
Intersection Capacity Utilization		26.8%	ICU Level of Service A
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis
28: Stanley Blvd & Valley

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	204	196	44	186	837	1201	115	446	112	216	298	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.91	0.91	1.00	0.95	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	0.98	1.00	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.94	0.85	1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3547	3657	1591	3547	3241	1489	1829	3657	1599	3547	3469	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3547	3657	1591	3547	3241	1489	1829	3657	1599	3547	3469	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	224	215	48	204	920	1320	126	490	123	237	327	171
RTOR Reduction (vph)	0	0	28	0	87	198	0	0	0	0	74	0
Lane Group Flow (vph)	224	215	20	204	1453	502	126	490	123	237	424	0
Confl. Peds. (#/hr)			12			36			36			
Turn Type	Prot		Perm	Prot		Prot	Prot		Free	Prot		
Protected Phases	1	6		5	2	2	3	8		7	4	
Permitted Phases			6						Free			
Actuated Green, G (s)	10.3	37.0	37.0	10.2	36.9	36.9	10.8	19.8	100.0	12.0	21.0	
Effective Green, g (s)	11.3	41.0	41.0	11.2	40.9	40.9	11.8	22.8	100.0	13.0	24.0	
Actuated g/C Ratio	0.11	0.41	0.41	0.11	0.41	0.41	0.12	0.23	1.00	0.13	0.24	
Clearance Time (s)	4.0	7.0	7.0	4.0	7.0	7.0	4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	401	1499	652	397	1326	609	216	834	1599	461	833	
v/s Ratio Prot	c0.06	0.06		0.06	c0.45	0.34	c0.07	c0.13		0.07	0.12	
v/s Ratio Perm			0.01						c0.08			
v/c Ratio	0.56	0.14	0.03	0.51	1.10	0.82	0.58	0.59	0.08	0.51	0.51	
Uniform Delay, d1	42.0	18.5	17.6	41.8	29.6	26.3	41.8	34.4	0.0	40.6	32.9	
Progression Factor	1.01	0.90	1.14	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.7	0.2	0.1	1.1	55.3	12.0	4.0	1.1	0.1	1.0	0.5	
Delay (s)	44.1	16.8	20.2	43.0	84.8	38.4	45.7	35.5	0.1	41.5	33.4	
Level of Service	D	B	C	D	F	D	D	D	A	D	C	
Approach Delay (s)		29.7			68.0			31.3			36.0	
Approach LOS		C			E			C			D	

Intersection Summary			
HCM Average Control Delay	52.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
30: Vineyard-Tawny & Bernal

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	128	4	32	74	59	173	33	303	16	75	385	151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			1.00	1.00	1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.94			1.00	0.85	1.00	0.99		1.00	0.96	
Flt Protected	0.95	0.97			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1477	1412			1592	1391	1829	3629		1829	1828	
Flt Permitted	0.95	0.97			0.97	1.00	0.20	1.00		0.50	1.00	
Satd. Flow (perm)	1477	1412			1592	1391	393	3629		972	1828	
Peak-hour factor, PHF	0.87	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	147	5	38	87	69	204	39	356	19	88	453	178
RTOR Reduction (vph)	0	26	0	0	0	110	0	4	0	0	14	0
Lane Group Flow (vph)	97	67	0	0	156	94	39	371	0	88	617	0
Confl. Peds. (#/hr)			3	3			4					4
Parking (#/hr)	10	10	10	10	10	10						
Turn Type	Split			Split		Perm	Perm			Perm		
Protected Phases	4	4		3	3			2			6	
Permitted Phases						3	2			6		
Actuated Green, G (s)	10.0	10.0			13.1	13.1	29.7	29.7		29.7	29.7	
Effective Green, g (s)	12.0	12.0			15.1	15.1	31.7	31.7		31.7	31.7	
Actuated g/C Ratio	0.18	0.18			0.22	0.22	0.47	0.47		0.47	0.47	
Clearance Time (s)	5.0	5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	261	250			355	310	184	1697		454	855	
v/s Ratio Prot	c0.07	0.05			c0.10			0.10			c0.34	
v/s Ratio Perm						0.07	0.10			0.09		
v/c Ratio	0.37	0.27			0.44	0.30	0.21	0.22		0.19	0.72	
Uniform Delay, d1	24.6	24.1			22.7	22.0	10.7	10.7		10.6	14.5	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	0.6			0.9	0.6	0.6	0.1		0.2	3.0	
Delay (s)	25.5	24.7			23.6	22.5	11.2	10.8		10.8	17.5	
Level of Service	C	C			C	C	B	B		B	B	
Approach Delay (s)		25.1			23.0			10.8			16.7	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	67.8	Sum of lost time (s)	9.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
93: Vineyard-Ray St & First

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	108	87	137	226	60	43	370	63	38	813	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1829	1925	1614	1554	1636	1372	1829	3548		1829	3657	1577
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1829	1925	1614	1554	1636	1372	1829	3548		1829	3657	1577
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	23	120	97	152	251	67	48	411	70	42	903	153
RTOR Reduction (vph)	0	0	83	0	0	26	0	10	0	0	0	80
Lane Group Flow (vph)	23	120	14	152	251	41	48	471	0	42	903	73
Confl. Peds. (#/hr)			1			1			9			4
Parking (#/hr)				10	10	10						
Turn Type	Split		Perm	Split		Perm	Prot			Prot		Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases			4			3						2
Actuated Green, G (s)	13.3	13.3	13.3	19.0	19.0	19.0	5.2	45.6		5.1	45.5	45.5
Effective Green, g (s)	14.3	14.3	14.3	20.0	20.0	20.0	6.2	47.6		6.1	47.5	47.5
Actuated g/C Ratio	0.14	0.14	0.14	0.20	0.20	0.20	0.06	0.48		0.06	0.48	0.48
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	262	275	231	311	327	274	113	1689		112	1737	749
v/s Ratio Prot	0.01	c0.06		0.10	c0.15		c0.03	0.13		0.02	c0.25	
v/s Ratio Perm			0.01			0.03						0.05
v/c Ratio	0.09	0.44	0.06	0.49	0.77	0.15	0.42	0.28		0.38	0.52	0.10
Uniform Delay, d1	37.2	39.2	37.0	35.5	37.8	33.0	45.2	15.8		45.1	18.3	14.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.37	0.70		1.51	0.37	0.11
Incremental Delay, d2	0.1	1.1	0.1	1.2	10.3	0.3	2.4	0.4		1.9	1.0	0.2
Delay (s)	37.3	40.3	37.1	36.7	48.1	33.3	64.2	11.4		69.9	7.8	1.9
Level of Service	D	D	D	D	D	C	E	B		E	A	A
Approach Delay (s)		38.7			42.3			16.2			9.4	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM Average Control Delay	20.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
94: Kottinger-Spring & First

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	13	46	11	29	77	52	23	420	39	35	921	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00	0.93	1.00	0.99		1.00	0.99	
Flpb, ped/bikes		0.99			0.99	1.00	1.00	1.00		0.96	1.00	
Frt		0.98			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1553			1591	1292	1554	1599		1488	1602	
Flt Permitted		0.94			0.93	1.00	0.17	1.00		0.45	1.00	
Satd. Flow (perm)		1477			1493	1292	283	1599		701	1602	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	14	51	12	32	85	57	25	462	43	38	1012	85
RTOR Reduction (vph)	0	8	0	0	0	49	0	2	0	0	2	0
Lane Group Flow (vph)	0	69	0	0	117	8	25	503	0	38	1095	0
Confl. Peds. (#/hr)	36		24	24		36	36		36	36		36
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		13.7			13.7	13.7	78.3	78.3		78.3	78.3	
Effective Green, g (s)		14.7			14.7	14.7	79.3	79.3		79.3	79.3	
Actuated g/C Ratio		0.15			0.15	0.15	0.79	0.79		0.79	0.79	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		217			219	190	224	1268		556	1270	
v/s Ratio Prot								0.31			c0.68	
v/s Ratio Perm		0.05			c0.08	0.01	0.09			0.05		
v/c Ratio		0.32			0.53	0.04	0.11	0.40		0.07	0.86	
Uniform Delay, d1		38.2			39.5	36.6	2.4	3.1		2.3	6.8	
Progression Factor		1.00			1.00	1.00	1.62	1.80		0.63	2.01	
Incremental Delay, d2		0.9			2.5	0.1	1.0	0.9		0.2	7.1	
Delay (s)		39.0			42.0	36.7	4.8	6.5		1.6	20.7	
Level of Service		D			D	D	A	A		A	C	
Approach Delay (s)		39.0			40.3			6.4			20.1	
Approach LOS		D			D			A			C	

Intersection Summary			
HCM Average Control Delay	18.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
95: Neal St & First

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	55	67	43	114	24	28	419	27	4	886	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	0.92		1.00	0.97		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1537	1472		1536	1584		1554	1618		1543	1614	
Flt Permitted	0.47	1.00		0.51	1.00		0.21	1.00		0.47	1.00	
Satd. Flow (perm)	754	1472		829	1584		343	1618		758	1614	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	43	58	71	45	120	25	29	441	28	4	933	75
RTOR Reduction (vph)	0	55	0	0	9	0	0	1	0	0	2	0
Lane Group Flow (vph)	43	74	0	45	136	0	29	468	0	4	1006	0
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	13.9	13.9		13.9	13.9		78.1	78.1		78.1	78.1	
Effective Green, g (s)	14.9	14.9		14.9	14.9		79.1	79.1		79.1	79.1	
Actuated g/C Ratio	0.15	0.15		0.15	0.15		0.79	0.79		0.79	0.79	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	112	219		124	236		271	1280		600	1277	
v/s Ratio Prot		0.05			c0.09			0.29			c0.62	
v/s Ratio Perm	0.06			0.05			0.08			0.01		
v/c Ratio	0.38	0.34		0.36	0.57		0.11	0.37		0.01	0.79	
Uniform Delay, d1	38.4	38.1		38.3	39.6		2.4	3.1		2.2	5.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.83	1.42	
Incremental Delay, d2	2.2	0.9		1.8	3.4		0.8	0.8		0.0	2.6	
Delay (s)	40.6	39.0		40.1	43.0		3.2	3.9		1.8	10.9	
Level of Service	D	D		D	D		A	A		A	B	
Approach Delay (s)		39.4			42.3			3.8			10.9	
Approach LOS		D			D			A			B	

Intersection Summary			
HCM Average Control Delay	14.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
96: Bernal & First St

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	150	260	195	275	653	34	128	341	74	18	736	242
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95		0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.89	1.00	1.00		1.00	1.00	0.82	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3547	3657	1452	1829	3624		3547	1925	1345	1554	3223	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3547	3657	1452	1829	3624		3547	1925	1345	1554	3223	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	165	286	214	302	718	37	141	375	81	20	809	266
RTOR Reduction (vph)	0	0	177	0	4	0	0	0	45	0	27	0
Lane Group Flow (vph)	165	286	37	302	751	0	141	375	36	20	1048	0
Confl. Peds. (#/hr)			72			12			96			24
Parking (#/hr)										10	10	10
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases		4	4						2			
Actuated Green, G (s)	10.0	15.3	15.3	20.9	26.2		8.9	42.5	42.5	3.3	36.9	
Effective Green, g (s)	11.0	17.3	17.3	21.9	28.2		9.9	44.5	44.5	4.3	38.9	
Actuated g/C Ratio	0.11	0.17	0.17	0.22	0.28		0.10	0.44	0.44	0.04	0.39	
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0	5.0	4.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	390	633	251	401	1022		351	857	599	67	1254	
v/s Ratio Prot	0.05	c0.08		0.17	c0.21		c0.04	0.19		0.01	c0.33	
v/s Ratio Perm			0.03						0.03			
v/c Ratio	0.42	0.45	0.15	0.75	0.73		0.40	0.44	0.06	0.30	0.84	
Uniform Delay, d1	41.5	37.1	35.1	36.5	32.5		42.3	19.1	15.8	46.4	27.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.89	0.76	0.83	1.00	1.00	
Incremental Delay, d2	0.7	0.5	0.3	7.8	2.8		0.8	1.6	0.2	2.5	6.7	
Delay (s)	42.3	37.6	35.4	44.3	35.3		38.5	16.2	13.3	48.9	34.3	
Level of Service	D	D	D	D	D		D	B	B	D	C	
Approach Delay (s)		38.0			37.9			21.1			34.6	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	33.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
595: Vineyard & Adams

4/19/2013

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	100	86	23	84	97	87
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.64	0.64	0.64	0.64	0.64	0.64
Hourly flow rate (vph)	156	134	36	131	152	136
Pedestrians	20			20	20	
Lane Width (ft)	13.0			13.0	13.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	2			2	2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			311		467	263
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			311		467	263
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		71	82
cM capacity (veh/h)			1227		519	747

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	291	167	288
Volume Left	0	36	152
Volume Right	134	0	136
cSH	1700	1227	607
Volume to Capacity	0.17	0.03	0.47
Queue Length 95th (ft)	0	2	64
Control Delay (s)	0.0	1.9	16.2
Lane LOS		A	C
Approach Delay (s)	0.0	1.9	16.2
Approach LOS			C

Intersection Summary			
Average Delay		6.7	
Intersection Capacity Utilization		40.5%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
597: Kottinger & Adams

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	84	27	14	22	88	87	22	54	16	12	63	32
Peak Hour Factor	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Hourly flow rate (vph)	140	45	23	37	147	145	37	90	27	20	105	53

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	208	328	153	178
Volume Left (vph)	140	37	37	20
Volume Right (vph)	23	145	27	53
Hadj (s)	0.10	-0.18	-0.02	-0.12
Departure Headway (s)	5.4	5.0	5.6	5.5
Degree Utilization, x	0.32	0.46	0.24	0.27
Capacity (veh/h)	609	676	568	589
Control Delay (s)	10.9	12.1	10.4	10.5
Approach Delay (s)	10.9	12.1	10.4	10.5
Approach LOS	B	B	B	B

Intersection Summary			
Delay		11.2	
HCM Level of Service		B	
Intersection Capacity Utilization		44.2%	ICU Level of Service A
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis
28: Stanley Blvd & Valley

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	171	1145	89	120	264	302	62	343	539	1158	796	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.91	0.91	1.00	0.95	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	0.99	1.00	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.95	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3547	3657	1586	3547	3286	1489	1829	3657	1599	3547	3582	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3547	3657	1586	3547	3286	1489	1829	3657	1599	3547	3582	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	182	1218	95	128	281	321	66	365	573	1232	847	134
RTOR Reduction (vph)	0	0	61	0	41	123	0	0	0	0	9	0
Lane Group Flow (vph)	182	1218	34	128	375	63	66	365	573	1232	972	0
Confl. Peds. (#/hr)			12			36			36			
Turn Type	Prot		Perm	Prot		Prot	Prot		Free	Prot		
Protected Phases	1	6		5	2	2	3	8		7	4	
Permitted Phases			6						Free			
Actuated Green, G (s)	11.5	38.6	38.6	9.4	36.5	36.5	8.5	14.6	120.0	36.4	42.5	
Effective Green, g (s)	12.5	42.6	42.6	10.4	40.5	40.5	9.5	17.6	120.0	37.4	45.5	
Actuated g/C Ratio	0.10	0.36	0.36	0.09	0.34	0.34	0.08	0.15	1.00	0.31	0.38	
Clearance Time (s)	4.0	7.0	7.0	4.0	7.0	7.0	4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	369	1298	563	307	1109	503	145	536	1599	1105	1358	
v/s Ratio Prot	c0.05	c0.33		0.04	0.11	0.04	0.04	c0.10		c0.35	0.27	
v/s Ratio Perm			0.02						c0.36			
v/c Ratio	0.49	0.94	0.06	0.42	0.34	0.12	0.46	0.68	0.36	1.11	0.72	
Uniform Delay, d1	50.8	37.4	25.5	51.9	29.7	27.5	52.8	48.5	0.0	41.3	31.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.75	0.66	
Incremental Delay, d2	1.0	14.0	0.2	0.9	0.2	0.1	2.3	3.6	0.6	61.9	1.4	
Delay (s)	51.8	51.5	25.7	52.8	29.9	27.6	55.0	52.1	0.6	92.8	22.3	
Level of Service	D	D	C	D	C	C	E	D	A	F	C	
Approach Delay (s)		49.9			33.3			22.9			61.5	
Approach LOS		D			C			C			E	

Intersection Summary			
HCM Average Control Delay	47.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	94.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
30: Vineyard-Tawny & Bernal

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	135	51	21	29	29	65	23	794	58	52	225	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	1.00	
Frpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.97			1.00	0.85	1.00	0.99		1.00	0.95	
Flt Protected	0.95	0.99			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1477	1480			1596	1391	1822	3620		1829	1823	
Flt Permitted	0.95	0.99			0.98	1.00	0.48	1.00		0.23	1.00	
Satd. Flow (perm)	1477	1480			1596	1391	920	3620		434	1823	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	141	53	22	30	30	68	24	827	60	54	234	102
RTOR Reduction (vph)	0	17	0	0	0	58	0	8	0	0	23	0
Lane Group Flow (vph)	109	90	0	0	60	10	24	879	0	54	313	0
Confl. Peds. (#/hr)			3	3			4					4
Parking (#/hr)	10	10	10	10	10	10						
Turn Type	Split			Split		Perm	Perm			Perm		
Protected Phases	4	4		3	3			2			6	
Permitted Phases						3	2			6		
Actuated Green, G (s)	7.7	7.7			4.2	4.2	17.3	17.3		17.3	17.3	
Effective Green, g (s)	9.7	9.7			6.2	6.2	19.3	19.3		19.3	19.3	
Actuated g/C Ratio	0.22	0.22			0.14	0.14	0.44	0.44		0.44	0.44	
Clearance Time (s)	5.0	5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	324	325			224	195	402	1581		190	796	
v/s Ratio Prot	c0.07	0.06			c0.04			c0.24			0.17	
v/s Ratio Perm						0.01	0.03			0.12		
v/c Ratio	0.34	0.28			0.27	0.05	0.06	0.56		0.28	0.39	
Uniform Delay, d1	14.5	14.3			17.0	16.4	7.2	9.3		8.0	8.5	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	0.5			0.6	0.1	0.1	0.4		0.8	0.3	
Delay (s)	15.2	14.8			17.6	16.6	7.3	9.7		8.8	8.8	
Level of Service	B	B			B	B	A	A		A	A	
Approach Delay (s)		15.0			17.1			9.6			8.8	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	10.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	44.2	Sum of lost time (s)	9.0
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
93: Vineyard-Ray St & First

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	63	165	77	95	94	39	68	957	136	50	445	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1829	1925	1613	1554	1636	1371	1829	3560		1829	3657	1571
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1829	1925	1613	1554	1636	1371	1829	3560		1829	3657	1571
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	64	168	79	97	96	40	69	977	139	51	454	51
RTOR Reduction (vph)	0	0	40	0	0	35	0	7	0	0	0	22
Lane Group Flow (vph)	64	168	39	97	96	5	69	1109	0	51	454	29
Confl. Peds. (#/hr)			1			1			9			4
Parking (#/hr)				10	10	10						
Turn Type	Split		Perm	Split		Perm	Prot			Prot		Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases			4			3						2
Actuated Green, G (s)	15.9	15.9	15.9	13.8	13.8	13.8	7.2	66.5		6.8	66.1	66.1
Effective Green, g (s)	16.9	16.9	16.9	14.8	14.8	14.8	8.2	68.5		7.8	68.1	68.1
Actuated g/C Ratio	0.14	0.14	0.14	0.12	0.12	0.12	0.07	0.57		0.06	0.57	0.57
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	258	271	227	192	202	169	125	2032		119	2075	892
v/s Ratio Prot	0.03	c0.09		c0.06	0.06		0.04	c0.31		c0.03	0.12	
v/s Ratio Perm			0.02			0.00						0.02
v/c Ratio	0.25	0.62	0.17	0.51	0.48	0.03	0.55	0.55		0.43	0.22	0.03
Uniform Delay, d1	45.9	48.5	45.4	49.2	49.0	46.3	54.1	16.1		54.0	12.8	11.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.13	1.34		1.00	1.00	1.00
Incremental Delay, d2	0.5	4.2	0.4	2.1	1.8	0.1	2.7	0.5		2.5	0.2	0.1
Delay (s)	46.4	52.7	45.7	51.3	50.7	46.3	63.7	22.0		56.4	13.1	11.5
Level of Service	D	D	D	D	D	D	E	C		E	B	B
Approach Delay (s)		49.6			50.2			24.5			16.9	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM Average Control Delay	28.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
94: Kottinger-Spring & First

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	82	39	47	17	33	40	28	1060	21	27	566	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.97			1.00	0.92	1.00	1.00		1.00	0.99	
Flpb, ped/bikes		0.97			0.99	1.00	0.97	1.00		1.00	1.00	
Frt		0.96			1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		0.98			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1446			1585	1276	1500	1627		1554	1607	
Flt Permitted		0.82			0.89	1.00	0.38	1.00		0.15	1.00	
Satd. Flow (perm)		1222			1429	1276	595	1627		247	1607	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	85	40	48	18	34	41	29	1093	22	28	584	39
RTOR Reduction (vph)	0	12	0	0	0	34	0	0	0	0	2	0
Lane Group Flow (vph)	0	161	0	0	52	7	29	1115	0	28	621	0
Confl. Peds. (#/hr)	36		24	24		36	36		36	36		36
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		20.0			20.0	20.0	92.0	92.0		92.0	92.0	
Effective Green, g (s)		21.0			21.0	21.0	93.0	93.0		93.0	93.0	
Actuated g/C Ratio		0.18			0.18	0.18	0.78	0.78		0.78	0.78	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		214			250	223	461	1261		191	1245	
v/s Ratio Prot								c0.69			0.39	
v/s Ratio Perm		c0.13			0.04	0.01	0.05			0.11		
v/c Ratio		0.75			0.21	0.03	0.06	0.88		0.15	0.50	
Uniform Delay, d1		47.0			42.4	41.1	3.2	9.6		3.4	5.0	
Progression Factor		1.00			1.00	1.00	0.74	1.36		2.33	2.61	
Incremental Delay, d2		13.8			0.4	0.1	0.2	5.8		1.6	1.4	
Delay (s)		60.8			42.8	41.1	2.5	18.9		9.6	14.4	
Level of Service		E			D	D	A	B		A	B	
Approach Delay (s)		60.8			42.1			18.5			14.2	
Approach LOS		E			D			B			B	

Intersection Summary			
HCM Average Control Delay	21.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
95: Neal St & First

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	97	79	34	58	25	38	996	25	8	529	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.98	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.96		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1530	1500		1538	1545		1546	1629		1554	1603	
Flt Permitted	0.62	1.00		0.35	1.00		0.38	1.00		0.18	1.00	
Satd. Flow (perm)	1000	1500		563	1545		622	1629		297	1603	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	89	102	83	36	61	26	40	1048	26	8	557	68
RTOR Reduction (vph)	0	26	0	0	13	0	0	1	0	0	3	0
Lane Group Flow (vph)	89	159	0	36	74	0	40	1073	0	8	622	0
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	17.8	17.8		17.8	17.8		94.2	94.2		94.2	94.2	
Effective Green, g (s)	18.8	18.8		18.8	18.8		95.2	95.2		95.2	95.2	
Actuated g/C Ratio	0.16	0.16		0.16	0.16		0.79	0.79		0.79	0.79	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	157	235		88	242		493	1292		236	1272	
v/s Ratio Prot		c0.11			0.05			c0.66			0.39	
v/s Ratio Perm	0.09			0.06			0.06			0.03		
v/c Ratio	0.57	0.68		0.41	0.30		0.08	0.83		0.03	0.49	
Uniform Delay, d1	46.8	47.7		45.6	44.8		2.7	7.5		2.6	4.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		2.09	2.42	
Incremental Delay, d2	4.6	7.5		3.1	0.7		0.3	6.3		0.2	1.2	
Delay (s)	51.5	55.2		48.7	45.5		3.1	13.8		5.7	11.3	
Level of Service	D	E		D	D		A	B		A	B	
Approach Delay (s)		54.0			46.4			13.4			11.3	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	78.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
96: Bernal & First St

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	669	510	112	93	231	33	194	726	358	70	434	202
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95		0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.87	1.00	1.00		1.00	1.00	0.79	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3547	3657	1419	1829	3572		3547	1925	1291	1554	3172	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3547	3657	1419	1829	3572		3547	1925	1291	1554	3172	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	858	654	144	119	296	42	249	931	459	90	556	259
RTOR Reduction (vph)	0	0	88	0	9	0	0	0	152	0	43	0
Lane Group Flow (vph)	858	654	56	119	329	0	249	931	307	90	772	0
Confl. Peds. (#/hr)			72			12			96			24
Parking (#/hr)										10	10	10
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases		4	4						2			
Actuated Green, G (s)	22.2	25.7	25.7	12.7	16.2		19.0	53.5	53.5	10.1	44.6	
Effective Green, g (s)	23.2	27.7	27.7	13.7	18.2		20.0	55.5	55.5	11.1	46.6	
Actuated g/C Ratio	0.19	0.23	0.23	0.11	0.15		0.17	0.46	0.46	0.09	0.39	
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0	5.0	4.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	686	844	328	209	542		591	890	597	144	1232	
v/s Ratio Prot	c0.24	0.18		0.07	c0.09		0.07	c0.48		0.06	c0.24	
v/s Ratio Perm			0.04						0.24			
v/c Ratio	1.25	0.77	0.17	0.57	0.61		0.42	1.05	0.51	0.62	0.63	
Uniform Delay, d1	48.4	43.2	36.9	50.4	47.6		44.8	32.2	22.7	52.4	29.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.71	0.62	0.33	1.00	1.00	
Incremental Delay, d2	124.7	4.5	0.2	3.5	1.9		0.5	41.8	2.9	8.2	2.4	
Delay (s)	173.1	47.7	37.2	53.9	49.5		32.3	61.7	10.4	60.6	32.1	
Level of Service	F	D	D	D	D		C	E	B	E	C	
Approach Delay (s)		111.7			50.6			42.9			34.9	
Approach LOS		F			D			D			C	

Intersection Summary			
HCM Average Control Delay	66.6	HCM Level of Service	E
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
595: Vineyard & Adams

4/19/2013

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	187	22	14	137	26	33
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	205	24	15	151	29	36
Pedestrians	20			20	20	
Lane Width (ft)	13.0			13.0	13.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	2			2	2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			250		439	258
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			250		439	258
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		95	95
cM capacity (veh/h)			1292		548	753

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	230	166	65
Volume Left	0	15	29
Volume Right	24	0	36
cSH	1700	1292	647
Volume to Capacity	0.14	0.01	0.10
Queue Length 95th (ft)	0	1	8
Control Delay (s)	0.0	0.8	11.2
Lane LOS		A	B
Approach Delay (s)	0.0	0.8	11.2
Approach LOS			B

Intersection Summary			
Average Delay		1.9	
Intersection Capacity Utilization		34.3%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
597: Kottinger & Adams

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	21	47	15	7	34	10	17	35	13	7	24	11
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	26	58	19	9	42	12	21	43	16	9	30	14

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	102	63	80	52
Volume Left (vph)	26	9	21	9
Volume Right (vph)	19	12	16	14
Hadj (s)	0.00	-0.06	0.00	-0.09
Departure Headway (s)	4.3	4.3	4.3	4.3
Degree Utilization, x	0.12	0.07	0.10	0.06
Capacity (veh/h)	814	813	792	805
Control Delay (s)	7.9	7.6	7.8	7.6
Approach Delay (s)	7.9	7.6	7.8	7.6
Approach LOS	A	A	A	A

Intersection Summary			
Delay		7.7	
HCM Level of Service		A	
Intersection Capacity Utilization		27.0%	ICU Level of Service A
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis
28: Stanley Blvd & Valley

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	261	272	70	286	1136	1128	154	384	132	210	316	177
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	0.97	0.91		0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3547	5065		3547	3657	1599	1829	3657	1599	3547	3460	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3547	5065		3547	3657	1599	1829	3657	1599	3547	3460	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	287	299	77	314	1248	1240	169	422	145	231	347	195
RTOR Reduction (vph)	0	40	0	0	0	0	0	0	0	0	86	0
Lane Group Flow (vph)	287	336	0	314	1248	1240	169	422	145	231	456	0
Confl. Peds. (#/hr)			12			36			36			
Turn Type	Prot			Prot		Free	Prot		Free	Prot		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						Free			Free			
Actuated Green, G (s)	8.0	36.0		12.4	40.4	100.0	10.0	20.9	100.0	9.7	20.6	
Effective Green, g (s)	9.0	40.0		13.4	44.4	100.0	11.0	23.9	100.0	10.7	23.6	
Actuated g/C Ratio	0.09	0.40		0.13	0.44	1.00	0.11	0.24	1.00	0.11	0.24	
Clearance Time (s)	4.0	7.0		4.0	7.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	319	2026		475	1624	1599	201	874	1599	380	817	
v/s Ratio Prot	0.08	0.07		0.09	0.34		0.09	0.12		0.07	0.13	
v/s Ratio Perm						c0.78			0.09			
v/c Ratio	0.90	0.17		0.66	0.77	0.78	0.84	0.48	0.09	0.61	0.56	
Uniform Delay, d1	45.1	19.3		41.1	23.5	0.0	43.6	32.7	0.0	42.6	33.6	
Progression Factor	0.90	1.04		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	26.2	0.2		3.4	3.6	3.7	25.9	0.4	0.1	2.7	0.8	
Delay (s)	66.9	20.3		44.6	27.0	3.7	69.5	33.2	0.1	45.4	34.4	
Level of Service	E	C		D	C	A	E	C	A	D	C	
Approach Delay (s)		40.5			18.7			35.0			37.7	
Approach LOS		D			B			C			D	

Intersection Summary			
HCM Average Control Delay	27.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	0.0
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
30: Vineyard-Tawny & Bernal

4/18/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	134	3	39	88	59	173	28	311	14	84	604	171
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			1.00	1.00	1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.93			1.00	0.85	1.00	0.99		1.00	0.97	
Flt Protected	0.95	0.98			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1477	1401			1588	1391	1829	3634		1829	1848	
Flt Permitted	0.95	0.98			0.97	1.00	0.08	1.00		0.50	1.00	
Satd. Flow (perm)	1477	1401			1588	1391	159	3634		969	1848	
Peak-hour factor, PHF	0.87	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	154	4	46	104	69	204	33	366	16	99	711	201
RTOR Reduction (vph)	0	34	0	0	0	104	0	3	0	0	9	0
Lane Group Flow (vph)	105	65	0	0	173	100	33	379	0	99	903	0
Confl. Peds. (#/hr)			3	3			4					4
Parking (#/hr)	10	10	10	10	10	10						
Turn Type	Split			Split		Perm	Perm			Perm		
Protected Phases	4	4		3	3			2			6	
Permitted Phases						3	2			6		
Actuated Green, G (s)	13.1	13.1			14.1	14.1	46.5	46.5		46.5	46.5	
Effective Green, g (s)	15.1	15.1			16.1	16.1	48.5	48.5		48.5	48.5	
Actuated g/C Ratio	0.17	0.17			0.18	0.18	0.55	0.55		0.55	0.55	
Clearance Time (s)	5.0	5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	251	239			288	252	87	1987		530	1010	
v/s Ratio Prot	c0.07	0.05			c0.11			0.10			c0.49	
v/s Ratio Perm						0.07	0.21			0.10		
v/c Ratio	0.42	0.27			0.60	0.40	0.38	0.19		0.19	0.89	
Uniform Delay, d1	32.9	32.0			33.3	32.0	11.5	10.2		10.1	17.8	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.1	0.6			3.5	1.0	2.8	0.0		0.2	10.2	
Delay (s)	34.0	32.6			36.9	33.0	14.2	10.2		10.3	28.0	
Level of Service	C	C			D	C	B	B		B	C	
Approach Delay (s)		33.3			34.8			10.5			26.3	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM Average Control Delay	25.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	88.7	Sum of lost time (s)	9.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
93: Vineyard-Ray St & First

4/18/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	101	91	138	216	61	46	433	64	42	1013	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1829	1925	1614	1554	1636	1372	1829	3560		1829	3657	1577
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1829	1925	1614	1554	1636	1372	1829	3560		1829	3657	1577
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	24	112	101	153	240	68	51	481	71	47	1126	178
RTOR Reduction (vph)	0	0	87	0	0	27	0	9	0	0	0	83
Lane Group Flow (vph)	24	112	14	153	240	41	51	543	0	47	1126	95
Confl. Peds. (#/hr)			1			1			9			4
Parking (#/hr)				10	10	10						
Turn Type	Split		Perm	Split		Perm	Prot			Prot		Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases			4			3						2
Actuated Green, G (s)	13.1	13.1	13.1	18.7	18.7	18.7	6.6	46.0		5.2	44.6	44.6
Effective Green, g (s)	14.1	14.1	14.1	19.7	19.7	19.7	7.6	48.0		6.2	46.6	46.6
Actuated g/C Ratio	0.14	0.14	0.14	0.20	0.20	0.20	0.08	0.48		0.06	0.47	0.47
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	258	271	228	306	322	270	139	1709		113	1704	735
v/s Ratio Prot	0.01	c0.06		0.10	c0.15		0.03	0.15		c0.03	c0.31	
v/s Ratio Perm			0.01			0.03						0.06
v/c Ratio	0.09	0.41	0.06	0.50	0.75	0.15	0.37	0.32		0.42	0.66	0.13
Uniform Delay, d1	37.4	39.2	37.2	35.8	37.8	33.2	43.9	16.0		45.2	20.6	15.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.39	0.65		1.48	0.46	0.45
Incremental Delay, d2	0.2	1.0	0.1	1.3	9.0	0.3	1.5	0.4		2.0	1.7	0.3
Delay (s)	37.5	40.2	37.3	37.0	46.8	33.5	62.7	10.8		68.9	11.2	7.1
Level of Service	D	D	D	D	D	C	E	B		E	B	A
Approach Delay (s)		38.7			41.6			15.2			12.6	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM Average Control Delay	20.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
94: Kottinger-Spring & First

4/18/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	9	1	23	80	60	25	491	51	64	1064	108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00	0.93	1.00	0.99		1.00	0.99	
Flpb, ped/bikes		0.99			0.99	1.00	1.00	1.00		0.96	1.00	
Frt		0.99			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1585			1595	1292	1554	1595		1500	1596	
Flt Permitted		0.97			0.94	1.00	0.09	1.00		0.40	1.00	
Satd. Flow (perm)		1547			1517	1292	149	1595		632	1596	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	2	10	1	25	88	66	27	540	56	70	1169	119
RTOR Reduction (vph)	0	1	0	0	0	57	0	2	0	0	2	0
Lane Group Flow (vph)	0	12	0	0	113	9	27	594	0	70	1286	0
Confl. Peds. (#/hr)	36		24	24		36	36		36	36		36
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		13.3			13.3	13.3	78.7	78.7		78.7	78.7	
Effective Green, g (s)		14.3			14.3	14.3	79.7	79.7		79.7	79.7	
Actuated g/C Ratio		0.14			0.14	0.14	0.80	0.80		0.80	0.80	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		221			217	185	119	1271		504	1272	
v/s Ratio Prot								0.37			c0.81	
v/s Ratio Perm		0.01			c0.07	0.01	0.18			0.11		
v/c Ratio		0.05			0.52	0.05	0.23	0.47		0.14	1.01	
Uniform Delay, d1		37.0			39.7	37.0	2.5	3.3		2.3	10.1	
Progression Factor		1.00			1.00	1.00	1.63	1.82		0.50	2.22	
Incremental Delay, d2		0.1			2.2	0.1	4.1	1.1		0.5	25.4	
Delay (s)		37.1			41.9	37.1	8.2	7.1		1.6	47.9	
Level of Service		D			D	D	A	A		A	D	
Approach Delay (s)		37.1			40.1			7.2			45.5	
Approach LOS		D			D			A			D	

Intersection Summary			
HCM Average Control Delay	34.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	82.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
95: Neal St & First

4/18/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	54	80	50	134	22	42	506	33	3	1008	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	0.91		1.00	0.98		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1538	1459		1537	1594		1554	1617		1546	1614	
Flt Permitted	0.43	1.00		0.50	1.00		0.14	1.00		0.41	1.00	
Satd. Flow (perm)	702	1459		802	1594		232	1617		666	1614	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	57	84	53	141	23	44	533	35	3	1061	85
RTOR Reduction (vph)	0	65	0	0	8	0	0	1	0	0	2	0
Lane Group Flow (vph)	41	76	0	53	156	0	44	567	0	3	1144	0
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	15.1	15.1		15.1	15.1		76.9	76.9		76.9	76.9	
Effective Green, g (s)	16.1	16.1		16.1	16.1		77.9	77.9		77.9	77.9	
Actuated g/C Ratio	0.16	0.16		0.16	0.16		0.78	0.78		0.78	0.78	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	113	235		129	257		181	1260		519	1257	
v/s Ratio Prot		0.05			c0.10			0.35			c0.71	
v/s Ratio Perm	0.06			0.07			0.19			0.00		
v/c Ratio	0.36	0.32		0.41	0.61		0.24	0.45		0.01	0.91	
Uniform Delay, d1	37.4	37.1		37.7	39.0		3.0	3.8		2.5	8.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.90	1.55	
Incremental Delay, d2	2.0	0.8		2.1	4.0		3.2	1.2		0.0	3.2	
Delay (s)	39.4	37.9		39.8	43.1		6.2	4.9		2.2	16.2	
Level of Service	D	D		D	D		A	A		A	B	
Approach Delay (s)		38.2			42.3			5.0			16.1	
Approach LOS		D			D			A			B	

Intersection Summary			
HCM Average Control Delay	17.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
96: Bernal & First St

4/18/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	164	237	214	392	737	48	147	494	89	18	899	233
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95		0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.89	1.00	1.00		1.00	1.00	0.82	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3547	3657	1452	1829	3616		3547	1925	1345	1554	3250	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3547	3657	1452	1829	3616		3547	1925	1345	1554	3250	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	180	260	235	431	810	53	162	543	98	20	988	256
RTOR Reduction (vph)	0	0	184	0	5	0	0	0	57	0	21	0
Lane Group Flow (vph)	180	260	51	431	858	0	162	543	41	20	1223	0
Confl. Peds. (#/hr)			72			12			96			24
Parking (#/hr)										10	10	10
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases		4	4						2			
Actuated Green, G (s)	10.4	14.9	14.9	23.6	28.1		9.2	40.2	40.2	3.3	34.3	
Effective Green, g (s)	11.4	16.9	16.9	24.6	30.1		10.2	42.2	42.2	4.3	36.3	
Actuated g/C Ratio	0.11	0.17	0.17	0.25	0.30		0.10	0.42	0.42	0.04	0.36	
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0	5.0	4.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	404	618	245	450	1088		362	812	568	67	1180	
v/s Ratio Prot	c0.05	0.07		c0.24	c0.24		c0.05	0.28		0.01	c0.38	
v/s Ratio Perm			0.03						0.03			
v/c Ratio	0.45	0.42	0.21	0.96	0.79		0.45	0.67	0.07	0.30	1.04	
Uniform Delay, d1	41.4	37.2	35.8	37.2	32.0		42.2	23.3	17.2	46.4	31.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.81	0.74	1.13	1.00	1.00	
Incremental Delay, d2	0.8	0.5	0.4	31.4	3.9		0.9	4.3	0.2	2.5	36.1	
Delay (s)	42.1	37.6	36.2	68.6	35.9		35.3	21.5	19.7	48.9	67.9	
Level of Service	D	D	D	E	D		D	C	B	D	E	
Approach Delay (s)		38.3			46.8			24.1			67.6	
Approach LOS		D			D			C			E	

Intersection Summary			
HCM Average Control Delay	47.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	88.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
595: Vineyard & Adams

4/18/2013

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	105	86	23	97	97	86
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.64	0.64	0.64	0.64	0.64	0.64
Hourly flow rate (vph)	164	134	36	152	152	134
Pedestrians	20			20	20	
Lane Width (ft)	13.0			13.0	13.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	2			2	2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			318		495	271
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			318		495	271
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		70	82
cM capacity (veh/h)			1219		500	740

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	298	188	286
Volume Left	0	36	152
Volume Right	134	0	134
cSH	1700	1219	590
Volume to Capacity	0.18	0.03	0.48
Queue Length 95th (ft)	0	2	66
Control Delay (s)	0.0	1.8	16.7
Lane LOS		A	C
Approach Delay (s)	0.0	1.8	16.7
Approach LOS			C

Intersection Summary			
Average Delay		6.6	
Intersection Capacity Utilization		41.3%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
597: Kottinger & Adams

4/18/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	83	32	14	22	97	87	22	54	16	12	63	32
Peak Hour Factor	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Hourly flow rate (vph)	138	53	23	37	162	145	37	90	27	20	105	53

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	215	343	153	178
Volume Left (vph)	138	37	37	20
Volume Right (vph)	23	145	27	53
Hadj (s)	0.10	-0.17	-0.02	-0.12
Departure Headway (s)	5.5	5.0	5.7	5.6
Degree Utilization, x	0.33	0.48	0.24	0.27
Capacity (veh/h)	605	673	557	579
Control Delay (s)	11.1	12.6	10.5	10.6
Approach Delay (s)	11.1	12.6	10.5	10.6
Approach LOS	B	B	B	B

Intersection Summary			
Delay		11.5	
HCM Level of Service		B	
Intersection Capacity Utilization		44.5%	ICU Level of Service A
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis
28: Stanley Blvd & Valley

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	209	1117	96	123	329	319	84	390	590	981	710	183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	0.97	0.91		0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3547	5180		3547	3657	1599	1829	3657	1599	3547	3545	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3547	5180		3547	3657	1599	1829	3657	1599	3547	3545	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	222	1188	102	131	350	339	89	415	628	1044	755	195
RTOR Reduction (vph)	0	9	0	0	0	0	0	0	0	0	19	0
Lane Group Flow (vph)	222	1282	0	131	350	339	89	415	628	1044	931	0
Confl. Peds. (#/hr)			12			36			36			
Turn Type	Prot			Prot		Free	Prot		Free	Prot		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						Free			Free			
Actuated Green, G (s)	10.7	31.0		7.0	27.3	120.0	9.9	14.8	120.0	46.2	51.1	
Effective Green, g (s)	11.7	35.0		8.0	31.3	120.0	10.9	17.8	120.0	47.2	54.1	
Actuated g/C Ratio	0.10	0.29		0.07	0.26	1.00	0.09	0.15	1.00	0.39	0.45	
Clearance Time (s)	4.0	7.0		4.0	7.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	346	1511		236	954	1599	166	542	1599	1395	1598	
v/s Ratio Prot	c0.06	c0.25		0.04	0.10		0.05	c0.11		c0.29	0.26	
v/s Ratio Perm						0.21			0.39			
v/c Ratio	0.64	0.85		0.56	0.37	0.21	0.54	0.77	0.39	0.75	0.58	
Uniform Delay, d1	52.1	40.0		54.3	36.3	0.0	52.1	49.1	0.0	31.3	24.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.68	0.60	
Incremental Delay, d2	4.0	6.1		2.8	0.2	0.3	3.3	6.4	0.7	2.7	0.4	
Delay (s)	56.2	46.1		57.1	36.5	0.3	55.4	55.5	0.7	24.1	15.1	
Level of Service	E	D		E	D	A	E	E	A	C	B	
Approach Delay (s)		47.6			24.8			25.1			19.8	
Approach LOS		D			C			C			B	

Intersection Summary			
HCM Average Control Delay	29.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
30: Vineyard-Tawny & Bernal

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	52	22	32	36	77	27	922	83	70	234	108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	1.00	
Frpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.96			1.00	0.85	1.00	0.99		1.00	0.95	
Flt Protected	0.95	0.99			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1477	1479			1599	1391	1823	3612		1829	1819	
Flt Permitted	0.95	0.99			0.98	1.00	0.47	1.00		0.20	1.00	
Satd. Flow (perm)	1477	1479			1599	1391	896	3612		377	1819	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	90	54	23	33	38	80	28	960	86	73	244	112
RTOR Reduction (vph)	0	18	0	0	0	69	0	9	0	0	23	0
Lane Group Flow (vph)	81	68	0	0	71	11	28	1037	0	73	333	0
Confl. Peds. (#/hr)			3	3			4					4
Parking (#/hr)	10	10	10	10	10	10						
Turn Type	Split			Split		Perm	Perm			Perm		
Protected Phases	4	4		3	3			2			6	
Permitted Phases						3	2			6		
Actuated Green, G (s)	7.2	7.2			4.2	4.2	18.4	18.4		18.4	18.4	
Effective Green, g (s)	9.2	9.2			6.2	6.2	20.4	20.4		20.4	20.4	
Actuated g/C Ratio	0.21	0.21			0.14	0.14	0.46	0.46		0.46	0.46	
Clearance Time (s)	5.0	5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	303	304			221	193	408	1645		172	828	
v/s Ratio Prot	c0.05	0.05			c0.04			c0.29			0.18	
v/s Ratio Perm						0.01	0.03			0.19		
v/c Ratio	0.27	0.22			0.32	0.06	0.07	0.63		0.42	0.40	
Uniform Delay, d1	15.0	14.8			17.4	16.8	6.9	9.3		8.2	8.1	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.5	0.4			0.8	0.1	0.1	0.8		1.7	0.3	
Delay (s)	15.4	15.2			18.2	16.9	6.9	10.1		9.9	8.5	
Level of Service	B	B			B	B	A	B		A	A	
Approach Delay (s)		15.3			17.5			10.0			8.7	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	44.8	Sum of lost time (s)	9.0
Intersection Capacity Utilization	58.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
93: Vineyard-Ray St & First

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	111	72	101	90	41	72	1125	117	39	493	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1829	1925	1613	1554	1636	1371	1829	3584		1829	3657	1571
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1829	1925	1613	1554	1636	1371	1829	3584		1829	3657	1571
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	58	113	73	103	92	42	73	1148	119	40	503	50
RTOR Reduction (vph)	0	0	56	0	0	37	0	5	0	0	0	21
Lane Group Flow (vph)	58	113	17	103	92	5	73	1262	0	40	503	29
Confl. Peds. (#/hr)			1			1			9			4
Parking (#/hr)				10	10	10						
Turn Type	Split		Perm	Split		Perm	Prot			Prot		Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases			4			3						2
Actuated Green, G (s)	13.7	13.7	13.7	14.1	14.1	14.1	7.2	68.6		6.6	68.0	68.0
Effective Green, g (s)	14.7	14.7	14.7	15.1	15.1	15.1	8.2	70.6		7.6	70.0	70.0
Actuated g/C Ratio	0.12	0.12	0.12	0.13	0.13	0.13	0.07	0.59		0.06	0.58	0.58
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	224	236	198	196	206	173	125	2109		116	2133	916
v/s Ratio Prot	0.03	c0.06		c0.07	0.06		0.04	c0.35		c0.02	0.14	
v/s Ratio Perm			0.01			0.00						0.02
v/c Ratio	0.26	0.48	0.09	0.53	0.45	0.03	0.58	0.60		0.34	0.24	0.03
Uniform Delay, d1	47.7	49.1	46.7	49.1	48.6	46.0	54.2	15.7		53.8	12.1	10.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.14	1.36		1.00	1.00	1.00
Incremental Delay, d2	0.6	1.5	0.2	2.5	1.5	0.1	1.9	0.3		1.8	0.3	0.1
Delay (s)	48.3	50.6	46.9	51.6	50.1	46.1	63.6	21.8		55.6	12.3	10.7
Level of Service	D	D	D	D	D	D	E	C		E	B	B
Approach Delay (s)		49.0			50.1			24.0			15.1	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM Average Control Delay	26.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
94: Kottinger-Spring & First

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	87	43	66	17	35	37	39	1211	22	24	620	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.97			1.00	0.92	1.00	1.00		1.00	0.99	
Flpb, ped/bikes		0.97			0.99	1.00	0.97	1.00		1.00	1.00	
Frt		0.95			1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		0.98			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1433			1589	1276	1511	1628		1554	1609	
Flt Permitted		0.84			0.88	1.00	0.34	1.00		0.06	1.00	
Satd. Flow (perm)		1227			1420	1276	546	1628		106	1609	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	90	44	68	18	36	38	40	1248	23	25	639	39
RTOR Reduction (vph)	0	16	0	0	0	31	0	0	0	0	2	0
Lane Group Flow (vph)	0	186	0	0	54	7	40	1271	0	25	676	0
Confl. Peds. (#/hr)	36		24	24		36	36		36	36		36
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		21.7			21.7	21.7	90.3	90.3		90.3	90.3	
Effective Green, g (s)		22.7			22.7	22.7	91.3	91.3		91.3	91.3	
Actuated g/C Ratio		0.19			0.19	0.19	0.76	0.76		0.76	0.76	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		232			269	241	415	1239		81	1224	
v/s Ratio Prot								c0.78			0.42	
v/s Ratio Perm		c0.15			0.04	0.01	0.07			0.24		
v/c Ratio		0.80			0.20	0.03	0.10	1.03		0.31	0.55	
Uniform Delay, d1		46.5			41.0	39.7	3.7	14.4		4.5	5.9	
Progression Factor		1.00			1.00	1.00	0.63	1.25		2.44	2.53	
Incremental Delay, d2		17.7			0.4	0.1	0.1	21.4		9.5	1.8	
Delay (s)		64.2			41.4	39.7	2.5	39.3		20.4	16.8	
Level of Service		E			D	D	A	D		C	B	
Approach Delay (s)		64.2			40.7			38.2			16.9	
Approach LOS		E			D			D			B	

Intersection Summary			
HCM Average Control Delay	34.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	100.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
95: Neal St & First

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	121	93	37	58	23	48	1166	36	9	600	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.98	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.96		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1530	1504		1540	1550		1548	1627		1554	1604	
Flt Permitted	0.64	1.00		0.30	1.00		0.33	1.00		0.08	1.00	
Satd. Flow (perm)	1030	1504		480	1550		545	1627		129	1604	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	91	127	98	39	61	24	51	1227	38	9	632	73
RTOR Reduction (vph)	0	25	0	0	12	0	0	1	0	0	3	0
Lane Group Flow (vph)	91	200	0	39	73	0	51	1264	0	9	702	0
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.3	20.3		20.3	20.3		91.7	91.7		91.7	91.7	
Effective Green, g (s)	21.3	21.3		21.3	21.3		92.7	92.7		92.7	92.7	
Actuated g/C Ratio	0.18	0.18		0.18	0.18		0.77	0.77		0.77	0.77	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	183	267		85	275		421	1257		100	1239	
v/s Ratio Prot		c0.13			0.05			c0.78			0.44	
v/s Ratio Perm	0.09			0.08			0.09			0.07		
v/c Ratio	0.50	0.75		0.46	0.26		0.12	1.01		0.09	0.57	
Uniform Delay, d1	44.5	46.8		44.2	42.6		3.4	13.6		3.3	5.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		2.08	2.30	
Incremental Delay, d2	2.1	11.2		3.9	0.5		0.6	26.8		1.5	1.6	
Delay (s)	46.6	58.1		48.1	43.1		4.0	40.5		8.4	14.3	
Level of Service	D	E		D	D		A	D		A	B	
Approach Delay (s)		54.8			44.7			39.0			14.2	
Approach LOS		D			D			D			B	

Intersection Summary			
HCM Average Control Delay	34.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	90.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
96: Bernal & First St

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	599	519	152	116	234	27	303	921	517	68	566	212
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95		0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.87	1.00	1.00		1.00	1.00	0.79	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3547	3657	1419	1829	3585		3547	1925	1291	1554	3201	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3547	3657	1419	1829	3585		3547	1925	1291	1554	3201	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	768	665	195	149	300	35	388	1181	663	87	726	272
RTOR Reduction (vph)	0	0	118	0	8	0	0	0	175	0	31	0
Lane Group Flow (vph)	768	665	77	149	327	0	388	1181	488	87	967	0
Confl. Peds. (#/hr)			72			12			96			24
Parking (#/hr)										10	10	10
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases		4	4						2			
Actuated Green, G (s)	23.0	25.3	25.3	13.9	16.2		19.0	52.8	52.8	10.0	43.8	
Effective Green, g (s)	24.0	27.3	27.3	14.9	18.2		20.0	54.8	54.8	11.0	45.8	
Actuated g/C Ratio	0.20	0.23	0.23	0.12	0.15		0.17	0.46	0.46	0.09	0.38	
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0	5.0	4.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	709	832	323	227	544		591	879	590	142	1222	
v/s Ratio Prot	c0.22	0.18		c0.08	c0.09		0.11	c0.61		0.06	c0.30	
v/s Ratio Perm			0.05						0.38			
v/c Ratio	1.08	0.80	0.24	0.66	0.60		0.66	1.34	0.83	0.61	0.79	
Uniform Delay, d1	48.0	43.8	37.9	50.1	47.5		46.8	32.6	28.5	52.4	32.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.71	0.63	0.38	1.00	1.00	
Incremental Delay, d2	58.6	5.4	0.4	6.7	1.9		2.1	160.8	10.4	7.6	5.3	
Delay (s)	106.6	49.2	38.2	56.8	49.4		35.5	181.4	21.1	60.1	38.2	
Level of Service	F	D	D	E	D		D	F	C	E	D	
Approach Delay (s)		74.9			51.7			108.4			39.9	
Approach LOS		E			D			F			D	

Intersection Summary			
HCM Average Control Delay	79.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
595: Vineyard & Adams

4/19/2013

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	186	22	13	146	26	32
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	204	24	14	160	29	35
Pedestrians	20			20	20	
Lane Width (ft)	13.0			13.0	13.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	2			2	2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			249		445	256
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			249		445	256
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		95	95
cM capacity (veh/h)			1293		544	754

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	229	175	64
Volume Left	0	14	29
Volume Right	24	0	35
cSH	1700	1293	643
Volume to Capacity	0.13	0.01	0.10
Queue Length 95th (ft)	0	1	8
Control Delay (s)	0.0	0.7	11.2
Lane LOS		A	B
Approach Delay (s)	0.0	0.7	11.2
Approach LOS			B

Intersection Summary			
Average Delay		1.8	
Intersection Capacity Utilization		33.9%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
597: Kottinger & Adams

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	20	50	15	7	36	10	17	35	13	7	24	10
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	25	62	19	9	44	12	21	43	16	9	30	12

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	105	65	80	51
Volume Left (vph)	25	9	21	9
Volume Right (vph)	19	12	16	12
Hadj (s)	-0.02	-0.01	0.00	-0.08
Departure Headway (s)	4.2	4.3	4.3	4.3
Degree Utilization, x	0.12	0.08	0.10	0.06
Capacity (veh/h)	818	804	789	799
Control Delay (s)	7.8	7.7	7.8	7.6
Approach Delay (s)	7.8	7.7	7.8	7.6
Approach LOS	A	A	A	A

Intersection Summary			
Delay		7.8	
HCM Level of Service		A	
Intersection Capacity Utilization		26.9%	ICU Level of Service A
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis
28: Stanley Blvd & Valley

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	261	273	70	287	1137	1128	154	384	133	210	316	177
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	0.97	0.91		0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3547	5065		3547	3657	1599	1829	3657	1599	3547	3460	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3547	5065		3547	3657	1599	1829	3657	1599	3547	3460	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	287	300	77	315	1249	1240	169	422	146	231	347	195
RTOR Reduction (vph)	0	40	0	0	0	0	0	0	0	0	86	0
Lane Group Flow (vph)	287	337	0	315	1249	1240	169	422	146	231	456	0
Confl. Peds. (#/hr)			12			36			36			
Turn Type	Prot			Prot		Free	Prot		Free	Prot		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						Free			Free			
Actuated Green, G (s)	8.0	36.0		12.4	40.4	100.0	10.0	20.9	100.0	9.7	20.6	
Effective Green, g (s)	9.0	40.0		13.4	44.4	100.0	11.0	23.9	100.0	10.7	23.6	
Actuated g/C Ratio	0.09	0.40		0.13	0.44	1.00	0.11	0.24	1.00	0.11	0.24	
Clearance Time (s)	4.0	7.0		4.0	7.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	319	2026		475	1624	1599	201	874	1599	380	817	
v/s Ratio Prot	0.08	0.07		0.09	0.34		0.09	0.12		0.07	0.13	
v/s Ratio Perm						c0.78			0.09			
v/c Ratio	0.90	0.17		0.66	0.77	0.78	0.84	0.48	0.09	0.61	0.56	
Uniform Delay, d1	45.1	19.3		41.2	23.5	0.0	43.6	32.7	0.0	42.6	33.6	
Progression Factor	0.91	1.04		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	26.2	0.2		3.5	3.6	3.7	25.9	0.4	0.1	2.7	0.8	
Delay (s)	67.0	20.2		44.6	27.0	3.7	69.5	33.2	0.1	45.4	34.4	
Level of Service	E	C		D	C	A	E	C	A	D	C	
Approach Delay (s)		40.4			18.7			34.9			37.7	
Approach LOS		D			B			C			D	

Intersection Summary			
HCM Average Control Delay	27.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	0.0
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
30: Vineyard-Tawny & Bernal

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	135	3	39	88	59	173	28	311	14	84	604	172
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			1.00	1.00	1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.93			1.00	0.85	1.00	0.99		1.00	0.97	
Flt Protected	0.95	0.98			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1477	1401			1588	1391	1829	3634		1829	1848	
Flt Permitted	0.95	0.98			0.97	1.00	0.08	1.00		0.50	1.00	
Satd. Flow (perm)	1477	1401			1588	1391	159	3634		969	1848	
Peak-hour factor, PHF	0.87	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	155	4	46	104	69	204	33	366	16	99	711	202
RTOR Reduction (vph)	0	33	0	0	0	104	0	3	0	0	9	0
Lane Group Flow (vph)	105	67	0	0	173	100	33	379	0	99	904	0
Confl. Peds. (#/hr)			3	3			4					4
Parking (#/hr)	10	10	10	10	10	10						
Turn Type	Split			Split		Perm	Perm			Perm		
Protected Phases	4	4		3	3			2			6	
Permitted Phases						3	2			6		
Actuated Green, G (s)	13.1	13.1			14.1	14.1	46.5	46.5		46.5	46.5	
Effective Green, g (s)	15.1	15.1			16.1	16.1	48.5	48.5		48.5	48.5	
Actuated g/C Ratio	0.17	0.17			0.18	0.18	0.55	0.55		0.55	0.55	
Clearance Time (s)	5.0	5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	251	239			288	252	87	1987		530	1010	
v/s Ratio Prot	c0.07	0.05			c0.11			0.10			c0.49	
v/s Ratio Perm						0.07	0.21			0.10		
v/c Ratio	0.42	0.28			0.60	0.40	0.38	0.19		0.19	0.89	
Uniform Delay, d1	32.9	32.1			33.3	32.0	11.5	10.2		10.1	17.8	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.1	0.6			3.5	1.0	2.8	0.0		0.2	10.3	
Delay (s)	34.0	32.7			36.9	33.0	14.2	10.2		10.3	28.1	
Level of Service	C	C			D	C	B	B		B	C	
Approach Delay (s)		33.4			34.8			10.5			26.4	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM Average Control Delay	25.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	88.7	Sum of lost time (s)	9.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
93: Vineyard-Ray St & First

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	102	91	141	218	62	46	434	66	42	1013	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1829	1925	1614	1554	1636	1372	1829	3558		1829	3657	1577
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1829	1925	1614	1554	1636	1372	1829	3558		1829	3657	1577
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	24	113	101	157	242	69	51	482	73	47	1126	178
RTOR Reduction (vph)	0	0	87	0	0	28	0	9	0	0	0	83
Lane Group Flow (vph)	24	113	14	157	242	41	51	546	0	47	1126	95
Confl. Peds. (#/hr)			1			1			9			4
Parking (#/hr)				10	10	10						
Turn Type	Split		Perm	Split		Perm	Prot			Prot		Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases			4			3						2
Actuated Green, G (s)	13.1	13.1	13.1	18.7	18.7	18.7	6.6	46.0		5.2	44.6	44.6
Effective Green, g (s)	14.1	14.1	14.1	19.7	19.7	19.7	7.6	48.0		6.2	46.6	46.6
Actuated g/C Ratio	0.14	0.14	0.14	0.20	0.20	0.20	0.08	0.48		0.06	0.47	0.47
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	258	271	228	306	322	270	139	1708		113	1704	735
v/s Ratio Prot	0.01	c0.06		0.10	c0.15		0.03	0.15		c0.03	c0.31	
v/s Ratio Perm			0.01			0.03						0.06
v/c Ratio	0.09	0.42	0.06	0.51	0.75	0.15	0.37	0.32		0.42	0.66	0.13
Uniform Delay, d1	37.4	39.2	37.2	35.9	37.8	33.2	43.9	16.0		45.2	20.6	15.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.39	0.65		1.48	0.46	0.45
Incremental Delay, d2	0.2	1.0	0.1	1.5	9.5	0.3	1.5	0.5		2.0	1.7	0.3
Delay (s)	37.5	40.2	37.3	37.3	47.4	33.5	62.5	10.8		69.0	11.2	7.1
Level of Service	D	D	D	D	D	C	E	B		E	B	A
Approach Delay (s)		38.7			41.9			15.1			12.6	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM Average Control Delay	20.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
94: Kottinger-Spring & First

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	11	1	26	83	61	25	492	53	64	1066	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00	0.93	1.00	0.99		1.00	0.99	
Flpb, ped/bikes		0.99			0.98	1.00	1.00	1.00		0.97	1.00	
Frt		0.99			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1592			1591	1292	1554	1594		1500	1596	
Flt Permitted		0.97			0.93	1.00	0.09	1.00		0.40	1.00	
Satd. Flow (perm)		1558			1502	1292	141	1594		628	1596	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	2	12	1	29	91	67	27	541	58	70	1171	120
RTOR Reduction (vph)	0	1	0	0	0	57	0	2	0	0	2	0
Lane Group Flow (vph)	0	14	0	0	120	10	27	597	0	70	1289	0
Confl. Peds. (#/hr)	36		24	24		36	36		36	36		36
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		13.7			13.7	13.7	78.3	78.3		78.3	78.3	
Effective Green, g (s)		14.7			14.7	14.7	79.3	79.3		79.3	79.3	
Actuated g/C Ratio		0.15			0.15	0.15	0.79	0.79		0.79	0.79	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		229			221	190	112	1264		498	1266	
v/s Ratio Prot								0.37			c0.81	
v/s Ratio Perm		0.01			c0.08	0.01	0.19			0.11		
v/c Ratio		0.06			0.54	0.05	0.24	0.47		0.14	1.02	
Uniform Delay, d1		36.7			39.5	36.7	2.6	3.4		2.4	10.4	
Progression Factor		1.00			1.00	1.00	1.63	1.81		0.51	2.17	
Incremental Delay, d2		0.1			2.7	0.1	4.7	1.2		0.5	27.3	
Delay (s)		36.8			42.2	36.8	9.0	7.4		1.7	49.8	
Level of Service		D			D	D	A	A		A	D	
Approach Delay (s)		36.8			40.3			7.4			47.3	
Approach LOS		D			D			A			D	

Intersection Summary			
HCM Average Control Delay	35.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
95: Neal St & First

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	54	80	50	134	22	42	509	33	3	1013	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	0.91		1.00	0.98		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1538	1459		1537	1594		1554	1618		1546	1614	
Flt Permitted	0.43	1.00		0.50	1.00		0.14	1.00		0.41	1.00	
Satd. Flow (perm)	702	1459		802	1594		229	1618		663	1614	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	57	84	53	141	23	44	536	35	3	1066	85
RTOR Reduction (vph)	0	65	0	0	8	0	0	1	0	0	2	0
Lane Group Flow (vph)	41	76	0	53	156	0	44	570	0	3	1149	0
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	15.1	15.1		15.1	15.1		76.9	76.9		76.9	76.9	
Effective Green, g (s)	16.1	16.1		16.1	16.1		77.9	77.9		77.9	77.9	
Actuated g/C Ratio	0.16	0.16		0.16	0.16		0.78	0.78		0.78	0.78	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	113	235		129	257		178	1260		516	1257	
v/s Ratio Prot		0.05			c0.10			0.35			c0.71	
v/s Ratio Perm	0.06			0.07			0.19			0.00		
v/c Ratio	0.36	0.32		0.41	0.61		0.25	0.45		0.01	0.91	
Uniform Delay, d1	37.4	37.1		37.7	39.0		3.0	3.8		2.5	8.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.86	1.53	
Incremental Delay, d2	2.0	0.8		2.1	4.0		3.3	1.2		0.0	3.2	
Delay (s)	39.4	37.9		39.8	43.1		6.3	4.9		2.1	16.2	
Level of Service	D	D		D	D		A	A		A	B	
Approach Delay (s)		38.2			42.3			5.0			16.1	
Approach LOS		D			D			A			B	

Intersection Summary			
HCM Average Control Delay	17.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	81.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
96: Bernal & First St

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	165	237	214	392	737	48	147	496	89	18	902	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95		0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.89	1.00	1.00		1.00	1.00	0.82	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3547	3657	1452	1829	3616		3547	1925	1345	1554	3249	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3547	3657	1452	1829	3616		3547	1925	1345	1554	3249	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	181	260	235	431	810	53	162	545	98	20	991	258
RTOR Reduction (vph)	0	0	184	0	5	0	0	0	57	0	21	0
Lane Group Flow (vph)	181	260	51	431	858	0	162	545	41	20	1228	0
Confl. Peds. (#/hr)			72			12			96			24
Parking (#/hr)										10	10	10
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases		4	4						2			
Actuated Green, G (s)	10.4	14.9	14.9	23.6	28.1		9.2	40.2	40.2	3.3	34.3	
Effective Green, g (s)	11.4	16.9	16.9	24.6	30.1		10.2	42.2	42.2	4.3	36.3	
Actuated g/C Ratio	0.11	0.17	0.17	0.25	0.30		0.10	0.42	0.42	0.04	0.36	
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0	5.0	4.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	404	618	245	450	1088		362	812	568	67	1179	
v/s Ratio Prot	c0.05	0.07		c0.24	c0.24		c0.05	0.28		0.01	c0.38	
v/s Ratio Perm			0.03						0.03			
v/c Ratio	0.45	0.42	0.21	0.96	0.79		0.45	0.67	0.07	0.30	1.04	
Uniform Delay, d1	41.4	37.2	35.8	37.2	32.0		42.2	23.3	17.2	46.4	31.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.82	0.74	1.13	1.00	1.00	
Incremental Delay, d2	0.8	0.5	0.4	31.4	3.9		0.9	4.3	0.2	2.5	37.7	
Delay (s)	42.2	37.6	36.2	68.6	35.9		35.3	21.6	19.7	48.9	69.5	
Level of Service	D	D	D	E	D		D	C	B	D	E	
Approach Delay (s)		38.3			46.8			24.1			69.2	
Approach LOS		D			D			C			E	

Intersection Summary			
HCM Average Control Delay	47.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	88.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
595: Vineyard & Adams

4/19/2013

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	106	86	23	97	97	87
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.64	0.64	0.64	0.64	0.64	0.64
Hourly flow rate (vph)	166	134	36	152	152	136
Pedestrians	20			20	20	
Lane Width (ft)	13.0			13.0	13.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	2			2	2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			320		496	273
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			320		496	273
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		70	82
cM capacity (veh/h)			1218		499	738

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	300	188	288
Volume Left	0	36	152
Volume Right	134	0	136
cSH	1700	1218	589
Volume to Capacity	0.18	0.03	0.49
Queue Length 95th (ft)	0	2	67
Control Delay (s)	0.0	1.8	16.8
Lane LOS		A	C
Approach Delay (s)	0.0	1.8	16.8
Approach LOS			C

Intersection Summary			
Average Delay		6.7	
Intersection Capacity Utilization		41.3%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
597: Kottinger & Adams

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	84	32	14	22	97	87	22	54	16	12	63	32
Peak Hour Factor	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Hourly flow rate (vph)	140	53	23	37	162	145	37	90	27	20	105	53

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	217	343	153	178
Volume Left (vph)	140	37	37	20
Volume Right (vph)	23	145	27	53
Hadj (s)	0.10	-0.17	-0.02	-0.12
Departure Headway (s)	5.5	5.0	5.7	5.6
Degree Utilization, x	0.33	0.48	0.24	0.28
Capacity (veh/h)	605	672	556	579
Control Delay (s)	11.2	12.6	10.5	10.7
Approach Delay (s)	11.2	12.6	10.5	10.7
Approach LOS	B	B	B	B

Intersection Summary			
Delay		11.5	
HCM Level of Service		B	
Intersection Capacity Utilization		44.5%	ICU Level of Service A
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis
28: Stanley Blvd & Valley

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	209	1118	96	124	330	319	84	390	591	981	710	183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	0.97	0.91		0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3547	5180		3547	3657	1599	1829	3657	1599	3547	3545	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3547	5180		3547	3657	1599	1829	3657	1599	3547	3545	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	222	1189	102	132	351	339	89	415	629	1044	755	195
RTOR Reduction (vph)	0	9	0	0	0	0	0	0	0	0	19	0
Lane Group Flow (vph)	222	1283	0	132	351	339	89	415	629	1044	931	0
Confl. Peds. (#/hr)			12			36			36			
Turn Type	Prot			Prot		Free	Prot		Free	Prot		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						Free			Free			
Actuated Green, G (s)	10.7	31.0		7.0	27.3	120.0	9.9	14.8	120.0	46.2	51.1	
Effective Green, g (s)	11.7	35.0		8.0	31.3	120.0	10.9	17.8	120.0	47.2	54.1	
Actuated g/C Ratio	0.10	0.29		0.07	0.26	1.00	0.09	0.15	1.00	0.39	0.45	
Clearance Time (s)	4.0	7.0		4.0	7.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	346	1511		236	954	1599	166	542	1599	1395	1598	
v/s Ratio Prot	c0.06	c0.25		0.04	0.10		0.05	c0.11		c0.29	0.26	
v/s Ratio Perm						0.21			0.39			
v/c Ratio	0.64	0.85		0.56	0.37	0.21	0.54	0.77	0.39	0.75	0.58	
Uniform Delay, d1	52.1	40.0		54.3	36.3	0.0	52.1	49.1	0.0	31.3	24.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.68	0.60	
Incremental Delay, d2	4.0	6.1		2.9	0.2	0.3	3.3	6.4	0.7	2.7	0.4	
Delay (s)	56.2	46.1		57.2	36.5	0.3	55.4	55.5	0.7	24.1	15.1	
Level of Service	E	D		E	D	A	E	E	A	C	B	
Approach Delay (s)		47.6			24.9			25.1			19.8	
Approach LOS		D			C			C			B	

Intersection Summary			
HCM Average Control Delay	29.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
30: Vineyard-Tawny & Bernal

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	87	52	22	32	36	77	27	922	83	70	234	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	1.00	
Frpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.96			1.00	0.85	1.00	0.99		1.00	0.95	
Flt Protected	0.95	0.99			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1477	1479			1599	1391	1823	3612		1829	1818	
Flt Permitted	0.95	0.99			0.98	1.00	0.46	1.00		0.20	1.00	
Satd. Flow (perm)	1477	1479			1599	1391	891	3612		377	1818	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	91	54	23	33	38	80	28	960	86	73	244	114
RTOR Reduction (vph)	0	18	0	0	0	69	0	9	0	0	23	0
Lane Group Flow (vph)	82	68	0	0	71	11	28	1037	0	73	335	0
Confl. Peds. (#/hr)			3	3			4					4
Parking (#/hr)	10	10	10	10	10	10						
Turn Type	Split			Split		Perm	Perm			Perm		
Protected Phases	4	4		3	3			2			6	
Permitted Phases						3	2			6		
Actuated Green, G (s)	7.3	7.3			4.2	4.2	18.4	18.4		18.4	18.4	
Effective Green, g (s)	9.3	9.3			6.2	6.2	20.4	20.4		20.4	20.4	
Actuated g/C Ratio	0.21	0.21			0.14	0.14	0.45	0.45		0.45	0.45	
Clearance Time (s)	5.0	5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	306	306			221	192	405	1641		171	826	
v/s Ratio Prot	c0.06	0.05			c0.04			c0.29			0.18	
v/s Ratio Perm						0.01	0.03			0.19		
v/c Ratio	0.27	0.22			0.32	0.06	0.07	0.63		0.43	0.41	
Uniform Delay, d1	14.9	14.8			17.5	16.8	6.9	9.4		8.3	8.2	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.5	0.4			0.8	0.1	0.1	0.8		1.7	0.3	
Delay (s)	15.4	15.2			18.3	16.9	7.0	10.2		10.0	8.5	
Level of Service	B	B			B	B	A	B		B	A	
Approach Delay (s)		15.3			17.6			10.1			8.8	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	44.9	Sum of lost time (s)	9.0
Intersection Capacity Utilization	58.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
93: Vineyard-Ray St & First

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	113	72	104	92	42	72	1126	120	40	494	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1829	1925	1613	1554	1636	1371	1829	3582		1829	3657	1571
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1829	1925	1613	1554	1636	1371	1829	3582		1829	3657	1571
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	58	115	73	106	94	43	73	1149	122	41	504	50
RTOR Reduction (vph)	0	0	55	0	0	38	0	5	0	0	0	21
Lane Group Flow (vph)	58	115	18	106	94	5	73	1266	0	41	504	29
Confl. Peds. (#/hr)			1			1			9			4
Parking (#/hr)				10	10	10						
Turn Type	Split		Perm	Split		Perm	Prot			Prot		Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases			4			3						2
Actuated Green, G (s)	13.8	13.8	13.8	14.1	14.1	14.1	7.2	68.5		6.6	67.9	67.9
Effective Green, g (s)	14.8	14.8	14.8	15.1	15.1	15.1	8.2	70.5		7.6	69.9	69.9
Actuated g/C Ratio	0.12	0.12	0.12	0.13	0.13	0.13	0.07	0.59		0.06	0.58	0.58
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	226	237	199	196	206	173	125	2104		116	2130	915
v/s Ratio Prot	0.03	c0.06		c0.07	0.06		0.04	c0.35		c0.02	0.14	
v/s Ratio Perm			0.01			0.00						0.02
v/c Ratio	0.26	0.49	0.09	0.54	0.46	0.03	0.58	0.60		0.35	0.24	0.03
Uniform Delay, d1	47.6	49.0	46.6	49.2	48.6	46.0	54.2	15.8		53.8	12.1	10.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.14	1.36		1.00	1.00	1.00
Incremental Delay, d2	0.6	1.6	0.2	3.0	1.6	0.1	1.7	0.3		1.9	0.3	0.1
Delay (s)	48.2	50.6	46.8	52.2	50.2	46.1	63.6	21.9		55.7	12.4	10.7
Level of Service	D	D	D	D	D	D	E	C		E	B	B
Approach Delay (s)		48.9			50.4			24.1			15.2	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM Average Control Delay	27.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
94: Kottinger-Spring & First

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	88	46	66	20	38	38	39	1213	25	25	622	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.97			1.00	0.92	1.00	1.00		1.00	0.99	
Flpb, ped/bikes		0.97			0.99	1.00	0.97	1.00		1.00	1.00	
Frt		0.96			1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		0.98			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1437			1587	1276	1511	1627		1554	1609	
Flt Permitted		0.84			0.86	1.00	0.34	1.00		0.06	1.00	
Satd. Flow (perm)		1228			1391	1276	542	1627		97	1609	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	91	47	68	21	39	39	40	1251	26	26	641	40
RTOR Reduction (vph)	0	15	0	0	0	32	0	0	0	0	2	0
Lane Group Flow (vph)	0	191	0	0	60	7	40	1277	0	26	679	0
Confl. Peds. (#/hr)	36		24	24		36	36		36	36		36
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		22.0			22.0	22.0	90.0	90.0		90.0	90.0	
Effective Green, g (s)		23.0			23.0	23.0	91.0	91.0		91.0	91.0	
Actuated g/C Ratio		0.19			0.19	0.19	0.76	0.76		0.76	0.76	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		235			267	245	411	1234		74	1220	
v/s Ratio Prot								c0.78			0.42	
v/s Ratio Perm		c0.16			0.04	0.01	0.07			0.27		
v/c Ratio		0.81			0.22	0.03	0.10	1.03		0.35	0.56	
Uniform Delay, d1		46.4			41.0	39.4	3.8	14.5		4.8	6.1	
Progression Factor		1.00			1.00	1.00	0.64	1.25		2.38	2.51	
Incremental Delay, d2		18.8			0.4	0.1	0.1	24.3		12.4	1.8	
Delay (s)		65.2			41.4	39.5	2.6	42.4		23.8	17.0	
Level of Service		E			D	D	A	D		C	B	
Approach Delay (s)		65.2			40.6			41.2			17.3	
Approach LOS		E			D			D			B	

Intersection Summary			
HCM Average Control Delay	36.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	101.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
95: Neal St & First

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	121	93	37	58	23	48	1171	36	9	605	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.98	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.96		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1530	1504		1540	1550		1548	1627		1554	1605	
Flt Permitted	0.64	1.00		0.30	1.00		0.33	1.00		0.08	1.00	
Satd. Flow (perm)	1030	1504		480	1550		541	1627		124	1605	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	91	127	98	39	61	24	51	1233	38	9	637	73
RTOR Reduction (vph)	0	25	0	0	12	0	0	1	0	0	3	0
Lane Group Flow (vph)	91	200	0	39	73	0	51	1270	0	9	707	0
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.3	20.3		20.3	20.3		91.7	91.7		91.7	91.7	
Effective Green, g (s)	21.3	21.3		21.3	21.3		92.7	92.7		92.7	92.7	
Actuated g/C Ratio	0.18	0.18		0.18	0.18		0.77	0.77		0.77	0.77	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	183	267		85	275		418	1257		96	1240	
v/s Ratio Prot		c0.13			0.05			c0.78			0.44	
v/s Ratio Perm	0.09			0.08			0.09			0.07		
v/c Ratio	0.50	0.75		0.46	0.26		0.12	1.01		0.09	0.57	
Uniform Delay, d1	44.5	46.8		44.2	42.6		3.4	13.6		3.3	5.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		2.11	2.30	
Incremental Delay, d2	2.1	11.2		3.9	0.5		0.6	28.0		1.6	1.6	
Delay (s)	46.6	58.1		48.1	43.1		4.0	41.7		8.7	14.3	
Level of Service	D	E		D	D		A	D		A	B	
Approach Delay (s)		54.8			44.7			40.2			14.3	
Approach LOS		D			D			D			B	

Intersection Summary			
HCM Average Control Delay	34.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	90.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
96: Bernal & First St

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	601	519	152	116	234	27	303	924	517	68	569	214
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95		0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.87	1.00	1.00		1.00	1.00	0.79	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3547	3657	1419	1829	3585		3547	1925	1291	1554	3201	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3547	3657	1419	1829	3585		3547	1925	1291	1554	3201	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	771	665	195	149	300	35	388	1185	663	87	729	274
RTOR Reduction (vph)	0	0	118	0	8	0	0	0	174	0	31	0
Lane Group Flow (vph)	771	665	77	149	327	0	388	1185	489	87	972	0
Confl. Peds. (#/hr)			72			12			96			24
Parking (#/hr)										10	10	10
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases		4	4						2			
Actuated Green, G (s)	23.0	25.3	25.3	13.9	16.2		19.0	52.8	52.8	10.0	43.8	
Effective Green, g (s)	24.0	27.3	27.3	14.9	18.2		20.0	54.8	54.8	11.0	45.8	
Actuated g/C Ratio	0.20	0.23	0.23	0.12	0.15		0.17	0.46	0.46	0.09	0.38	
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0	5.0	4.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	709	832	323	227	544		591	879	590	142	1222	
v/s Ratio Prot	c0.22	0.18		c0.08	c0.09		0.11	c0.62		0.06	c0.30	
v/s Ratio Perm			0.05						0.38			
v/c Ratio	1.09	0.80	0.24	0.66	0.60		0.66	1.35	0.83	0.61	0.80	
Uniform Delay, d1	48.0	43.8	37.9	50.1	47.5		46.8	32.6	28.5	52.4	32.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.72	0.63	0.37	1.00	1.00	
Incremental Delay, d2	60.0	5.4	0.4	6.7	1.9		2.1	162.8	10.4	7.6	5.4	
Delay (s)	108.0	49.2	38.2	56.8	49.4		35.6	183.5	21.0	60.1	38.4	
Level of Service	F	D	D	E	D		D	F	C	E	D	
Approach Delay (s)		75.7			51.7			109.7			40.1	
Approach LOS		E			D			F			D	

Intersection Summary			
HCM Average Control Delay	80.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
595: Vineyard & Adams

4/19/2013

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	187	22	14	147	26	33
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	205	24	15	162	29	36
Pedestrians	20			20	20	
Lane Width (ft)	13.0			13.0	13.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	2			2	2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			250		450	258
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			250		450	258
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		95	95
cM capacity (veh/h)			1292		540	753

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	230	177	65
Volume Left	0	15	29
Volume Right	24	0	36
cSH	1700	1292	642
Volume to Capacity	0.14	0.01	0.10
Queue Length 95th (ft)	0	1	8
Control Delay (s)	0.0	0.8	11.2
Lane LOS		A	B
Approach Delay (s)	0.0	0.8	11.2
Approach LOS			B

Intersection Summary			
Average Delay		1.8	
Intersection Capacity Utilization		34.8%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
597: Kottinger & Adams

4/19/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	21	50	15	7	36	10	17	35	13	7	24	11
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	26	62	19	9	44	12	21	43	16	9	30	14

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	106	65	80	52
Volume Left (vph)	26	9	21	9
Volume Right (vph)	19	12	16	14
Hadj (s)	-0.02	-0.01	0.00	-0.09
Departure Headway (s)	4.3	4.3	4.3	4.3
Degree Utilization, x	0.13	0.08	0.10	0.06
Capacity (veh/h)	817	803	788	791
Control Delay (s)	7.9	7.7	7.8	7.6
Approach Delay (s)	7.9	7.7	7.8	7.6
Approach LOS	A	A	A	A

Intersection Summary			
Delay		7.8	
HCM Level of Service		A	
Intersection Capacity Utilization		27.1%	ICU Level of Service A
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis
28: Stanley Blvd & Valley

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	240	573	104	372	1395	909	186	308	229	226	250	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	0.97	0.91		0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3547	5113		3547	3657	1599	1829	3657	1599	3547	3459	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3547	5113		3547	3657	1599	1829	3657	1599	3547	3459	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	264	630	114	409	1533	999	204	338	252	248	275	156
RTOR Reduction (vph)	0	22	0	0	0	0	0	0	0	0	90	0
Lane Group Flow (vph)	264	722	0	409	1533	999	204	338	252	248	341	0
Confl. Peds. (#/hr)			12			36			36			
Turn Type	Prot			Prot		Free	Prot		Free	Prot		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						Free			Free			
Actuated Green, G (s)	7.0	34.8		15.1	42.9	100.0	10.0	18.5	100.0	10.6	19.1	
Effective Green, g (s)	8.0	38.8		16.1	46.9	100.0	11.0	21.5	100.0	11.6	22.1	
Actuated g/C Ratio	0.08	0.39		0.16	0.47	1.00	0.11	0.22	1.00	0.12	0.22	
Clearance Time (s)	4.0	7.0		4.0	7.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	284	1984		571	1715	1599	201	786	1599	411	764	
v/s Ratio Prot	c0.07	0.14		c0.12	c0.42		c0.11	0.09		0.07	0.10	
v/s Ratio Perm						c0.62			0.16			
v/c Ratio	0.93	0.36		0.72	0.89	0.62	1.01	0.43	0.16	0.60	0.45	
Uniform Delay, d1	45.7	21.8		39.8	24.3	0.0	44.5	34.0	0.0	42.0	33.7	
Progression Factor	0.82	1.31		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	33.6	0.5		4.3	7.6	1.9	67.4	0.4	0.2	2.5	0.4	
Delay (s)	70.9	29.1		44.1	31.9	1.9	111.9	34.3	0.2	44.5	34.1	
Level of Service	E	C		D	C	A	F	C	A	D	C	
Approach Delay (s)		40.1			23.4			43.4			37.9	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM Average Control Delay	31.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	80.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
30: Vineyard-Tawny & Bernal

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	169	2	35	88	26	220	23	452	10	82	763	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			1.00	1.00	1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.95			1.00	0.85	1.00	1.00		1.00	0.96	
Flt Protected	0.95	0.97			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1477	1419			1575	1391	1829	3645		1829	1842	
Flt Permitted	0.95	0.97			0.96	1.00	0.06	1.00		0.42	1.00	
Satd. Flow (perm)	1477	1419			1575	1391	116	3645		810	1842	
Peak-hour factor, PHF	0.87	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	194	2	41	104	31	259	27	532	12	96	898	278
RTOR Reduction (vph)	0	19	0	0	0	150	0	1	0	0	9	0
Lane Group Flow (vph)	120	98	0	0	135	109	27	543	0	96	1167	0
Confl. Peds. (#/hr)			3	3			4					4
Parking (#/hr)	10	10	10	10	10	10						
Turn Type	Split			Split		Perm	Perm			Perm		
Protected Phases	4	4		3	3			2			6	
Permitted Phases						3	2			6		
Actuated Green, G (s)	14.4	14.4			10.6	10.6	64.2	64.2		64.2	64.2	
Effective Green, g (s)	16.4	16.4			12.6	12.6	66.2	66.2		66.2	66.2	
Actuated g/C Ratio	0.16	0.16			0.12	0.12	0.64	0.64		0.64	0.64	
Clearance Time (s)	5.0	5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	232	223			190	168	74	2316		515	1170	
v/s Ratio Prot	c0.08	0.07			c0.09			0.15			c0.63	
v/s Ratio Perm						0.08	0.23			0.12		
v/c Ratio	0.52	0.44			0.71	0.65	0.36	0.23		0.19	1.00	
Uniform Delay, d1	40.3	39.8			44.0	43.7	9.0	8.1		7.9	18.9	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.9	1.4			11.8	8.3	3.0	0.1		0.2	25.5	
Delay (s)	42.2	41.1			55.9	52.0	12.1	8.2		8.0	44.4	
Level of Service	D	D			E	D	B	A		A	D	
Approach Delay (s)		41.7			53.3			8.4			41.6	
Approach LOS		D			D			A			D	

Intersection Summary			
HCM Average Control Delay	35.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	104.2	Sum of lost time (s)	9.0
Intersection Capacity Utilization	82.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
93: Vineyard-Ray St & First

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	85	86	108	182	65	58	682	66	44	1178	202
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1829	1925	1614	1554	1636	1372	1829	3591		1829	3657	1577
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1829	1925	1614	1554	1636	1372	1829	3591		1829	3657	1577
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	31	94	96	120	202	72	64	758	73	49	1309	224
RTOR Reduction (vph)	0	0	83	0	0	35	0	6	0	0	0	87
Lane Group Flow (vph)	31	94	13	120	202	37	64	825	0	49	1309	137
Confl. Peds. (#/hr)			1			1			9			4
Parking (#/hr)				10	10	10						
Turn Type	Split		Perm	Split		Perm	Prot			Prot		Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases			4			3						2
Actuated Green, G (s)	12.6	12.6	12.6	17.1	17.1	17.1	6.9	46.7		6.6	46.4	46.4
Effective Green, g (s)	13.6	13.6	13.6	18.1	18.1	18.1	7.9	48.7		7.6	48.4	48.4
Actuated g/C Ratio	0.14	0.14	0.14	0.18	0.18	0.18	0.08	0.49		0.08	0.48	0.48
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	249	262	220	281	296	248	144	1749		139	1770	763
v/s Ratio Prot	0.02	c0.05		0.08	c0.12		c0.03	0.23		0.03	c0.36	
v/s Ratio Perm			0.01			0.03						0.09
v/c Ratio	0.12	0.36	0.06	0.43	0.68	0.15	0.44	0.47		0.35	0.74	0.18
Uniform Delay, d1	38.0	39.2	37.6	36.3	38.3	34.5	44.0	17.1		43.9	20.7	14.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.29	0.83		1.44	0.44	0.51
Incremental Delay, d2	0.2	0.8	0.1	1.0	6.4	0.3	1.7	0.7		1.1	2.0	0.4
Delay (s)	38.2	40.1	37.7	37.4	44.6	34.7	58.3	14.8		64.4	11.2	7.8
Level of Service	D	D	D	D	D	C	E	B		E	B	A
Approach Delay (s)		38.8			40.6			17.9			12.3	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM Average Control Delay	19.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
94: Kottinger-Spring & First

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	11	1	16	70	74	26	735	52	79	1145	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00	0.93	1.00	0.99		1.00	0.99	
Flpb, ped/bikes		0.99			0.99	1.00	1.00	1.00		0.98	1.00	
Frt		0.99			1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected		0.99			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1577			1601	1292	1554	1607		1527	1589	
Flt Permitted		0.95			0.95	1.00	0.05	1.00		0.28	1.00	
Satd. Flow (perm)		1514			1538	1292	81	1607		446	1589	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	4	12	1	18	77	81	29	808	57	87	1258	153
RTOR Reduction (vph)	0	1	0	0	0	70	0	2	0	0	3	0
Lane Group Flow (vph)	0	16	0	0	95	11	29	863	0	87	1408	0
Confl. Peds. (#/hr)	36		24	24		36	36		36	36		36
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		12.7			12.7	12.7	79.3	79.3		79.3	79.3	
Effective Green, g (s)		13.7			13.7	13.7	80.3	80.3		80.3	80.3	
Actuated g/C Ratio		0.14			0.14	0.14	0.80	0.80		0.80	0.80	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		207			211	177	65	1290		358	1276	
v/s Ratio Prot								0.54			c0.89	
v/s Ratio Perm		0.01			c0.06	0.01	0.36			0.20		
v/c Ratio		0.08			0.45	0.06	0.45	0.67		0.24	1.10	
Uniform Delay, d1		37.6			39.7	37.6	3.0	4.2		2.4	9.9	
Progression Factor		1.00			1.00	1.00	1.48	1.76		0.30	2.16	
Incremental Delay, d2		0.2			1.5	0.1	16.9	2.3		1.2	56.0	
Delay (s)		37.8			41.2	37.7	21.4	9.6		1.9	77.3	
Level of Service		D			D	D	C	A		A	E	
Approach Delay (s)		37.8			39.6			10.0			72.9	
Approach LOS		D			D			B			E	

Intersection Summary			
HCM Average Control Delay	48.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	87.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
95: Neal St & First

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	46	80	52	136	25	56	744	38	3	1079	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.98		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1538	1447		1536	1590		1554	1621		1550	1614	
Flt Permitted	0.43	1.00		0.52	1.00		0.10	1.00		0.28	1.00	
Satd. Flow (perm)	690	1447		848	1590		169	1621		462	1614	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	45	48	84	55	143	26	59	783	40	3	1136	89
RTOR Reduction (vph)	0	70	0	0	8	0	0	1	0	0	2	0
Lane Group Flow (vph)	45	62	0	55	161	0	59	822	0	3	1223	0
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	15.4	15.4		15.4	15.4		76.6	76.6		76.6	76.6	
Effective Green, g (s)	16.4	16.4		16.4	16.4		77.6	77.6		77.6	77.6	
Actuated g/C Ratio	0.16	0.16		0.16	0.16		0.78	0.78		0.78	0.78	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	113	237		139	261		131	1258		359	1252	
v/s Ratio Prot		0.04			c0.10			0.51			c0.76	
v/s Ratio Perm	0.07			0.06			0.35			0.01		
v/c Ratio	0.40	0.26		0.40	0.62		0.45	0.65		0.01	0.98	
Uniform Delay, d1	37.4	36.5		37.4	38.9		3.9	5.1		2.5	10.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.89	1.56	
Incremental Delay, d2	2.3	0.6		1.9	4.3		10.8	2.7		0.0	4.0	
Delay (s)	39.7	37.1		39.2	43.1		14.6	7.7		2.3	20.2	
Level of Service	D	D		D	D		B	A		A	C	
Approach Delay (s)		37.8			42.2			8.2			20.2	
Approach LOS		D			D			A			C	

Intersection Summary			
HCM Average Control Delay	19.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	85.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
96: Bernal & First St

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	178	233	209	455	714	62	174	775	127	19	944	204
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.89	1.00	1.00		1.00	1.00	0.82	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3547	3657	1452	3547	3604		3547	1925	1345	1554	3268	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3547	3657	1452	3547	3604		3547	1925	1345	1554	3268	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	196	256	230	500	785	68	191	852	140	21	1037	224
RTOR Reduction (vph)	0	0	130	0	7	0	0	0	60	0	18	0
Lane Group Flow (vph)	196	256	100	500	846	0	191	852	80	21	1243	0
Confl. Peds. (#/hr)			72			12			96			24
Parking (#/hr)										10	10	10
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases		4	4						2			
Actuated Green, G (s)	7.0	14.9	14.9	17.6	25.5		7.0	46.7	46.7	2.8	42.5	
Effective Green, g (s)	8.0	16.9	16.9	18.6	27.5		8.0	48.7	48.7	3.8	44.5	
Actuated g/C Ratio	0.08	0.17	0.17	0.19	0.28		0.08	0.49	0.49	0.04	0.44	
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0	5.0	4.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	284	618	245	660	991		284	937	655	59	1454	
v/s Ratio Prot	c0.06	0.07		0.14	c0.23		c0.05	c0.44		0.01	0.38	
v/s Ratio Perm			0.07						0.06			
v/c Ratio	0.69	0.41	0.41	0.76	0.85		0.67	0.91	0.12	0.36	0.85	
Uniform Delay, d1	44.8	37.1	37.1	38.6	34.3		44.7	23.6	14.0	46.9	24.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.13	0.64	0.37	1.00	1.00	
Incremental Delay, d2	7.0	0.5	1.1	5.0	7.3		5.8	13.7	0.4	3.7	6.6	
Delay (s)	51.8	37.6	38.2	43.5	41.6		56.4	28.8	5.5	50.6	31.5	
Level of Service	D	D	D	D	D		E	C	A	D	C	
Approach Delay (s)		41.9			42.3			30.5			31.8	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	36.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	87.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
595: Vineyard & Adams

4/29/2013

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	115	95	30	120	107	95
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.64	0.64	0.64	0.64	0.64	0.64
Hourly flow rate (vph)	180	148	47	188	167	148
Pedestrians	20			20	20	
Lane Width (ft)	13.0			13.0	13.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	2			2	2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			348		575	294
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			348		575	294
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		62	79
cM capacity (veh/h)			1189		444	719

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	328	234	316
Volume Left	0	47	167
Volume Right	148	0	148
cSH	1700	1189	541
Volume to Capacity	0.19	0.04	0.58
Queue Length 95th (ft)	0	3	93
Control Delay (s)	0.0	1.9	20.5
Lane LOS		A	C
Approach Delay (s)	0.0	1.9	20.5
Approach LOS			C

Intersection Summary			
Average Delay		7.9	
Intersection Capacity Utilization		44.0%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
597: Kottinger & Adams

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	90	37	20	25	98	90	25	60	20	15	70	35
Peak Hour Factor	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Hourly flow rate (vph)	150	62	33	42	163	150	42	100	33	25	117	58

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	245	355	175	200
Volume Left (vph)	150	42	42	25
Volume Right (vph)	33	150	33	58
Hadj (s)	0.07	-0.17	-0.03	-0.12
Departure Headway (s)	5.7	5.3	5.9	5.8
Degree Utilization, x	0.39	0.52	0.29	0.32
Capacity (veh/h)	581	639	533	552
Control Delay (s)	12.3	13.9	11.3	11.5
Approach Delay (s)	12.3	13.9	11.3	11.5
Approach LOS	B	B	B	B

Intersection Summary			
Delay		12.6	
HCM Level of Service		B	
Intersection Capacity Utilization		45.7%	ICU Level of Service A
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis
28: Stanley Blvd & Valley

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	160	1224	143	254	741	363	140	346	644	666	706	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	0.97	0.91		0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3547	5156		3547	3657	1599	1829	3657	1599	3547	3551	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3547	5156		3547	3657	1599	1829	3657	1599	3547	3551	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	170	1302	152	270	788	386	149	368	685	709	751	180
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	17	0
Lane Group Flow (vph)	170	1442	0	270	788	386	149	368	685	709	914	0
Confl. Peds. (#/hr)			12			36			36			
Turn Type	Prot			Prot		Free	Prot		Free	Prot		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						Free			Free			
Actuated Green, G (s)	8.8	35.3		11.7	38.2	120.0	12.9	16.3	120.0	35.7	39.1	
Effective Green, g (s)	9.8	39.3		12.7	42.2	120.0	13.9	19.3	120.0	36.7	42.1	
Actuated g/C Ratio	0.08	0.33		0.11	0.35	1.00	0.12	0.16	1.00	0.31	0.35	
Clearance Time (s)	4.0	7.0		4.0	7.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	290	1689		375	1286	1599	212	588	1599	1085	1246	
v/s Ratio Prot	0.05	c0.28		c0.08	0.22		c0.08	c0.10		0.20	c0.26	
v/s Ratio Perm						0.24			c0.43			
v/c Ratio	0.59	0.85		0.72	0.61	0.24	0.70	0.63	0.43	0.65	0.73	
Uniform Delay, d1	53.1	37.7		51.9	32.1	0.0	51.1	47.0	0.0	36.1	34.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.80	0.78	
Incremental Delay, d2	3.0	5.7		6.5	0.9	0.4	10.1	2.1	0.8	2.8	2.1	
Delay (s)	56.2	43.4		58.4	33.0	0.4	61.1	49.1	0.8	31.6	28.6	
Level of Service	E	D		E	C	A	E	D	A	C	C	
Approach Delay (s)		44.7			29.0			23.1			29.9	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	32.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	80.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
30: Vineyard-Tawny & Bernal

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	92	49	13	31	30	76	36	1015	93	112	399	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	1.00	
Frpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.97			1.00	0.85	1.00	0.99		1.00	0.96	
Flt Protected	0.95	0.99			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1477	1496			1596	1391	1825	3611		1829	1825	
Flt Permitted	0.95	0.99			0.98	1.00	0.26	1.00		0.18	1.00	
Satd. Flow (perm)	1477	1496			1596	1391	504	3611		342	1825	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	96	51	14	32	31	79	38	1057	97	117	416	175
RTOR Reduction (vph)	0	11	0	0	0	68	0	9	0	0	20	0
Lane Group Flow (vph)	80	70	0	0	63	11	38	1145	0	117	571	0
Confl. Peds. (#/hr)			3	3			4					4
Parking (#/hr)	10	10	10	10	10	10						
Turn Type	Split			Split		Perm	Perm			Perm		
Protected Phases	4	4		3	3			2			6	
Permitted Phases						3	2			6		
Actuated Green, G (s)	7.5	7.5			4.3	4.3	20.5	20.5		20.5	20.5	
Effective Green, g (s)	9.5	9.5			6.3	6.3	22.5	22.5		22.5	22.5	
Actuated g/C Ratio	0.20	0.20			0.13	0.13	0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	297	300			213	185	240	1718		163	868	
v/s Ratio Prot	c0.05	0.05			c0.04			0.32			0.31	
v/s Ratio Perm						0.01	0.08			c0.34		
v/c Ratio	0.27	0.23			0.30	0.06	0.16	0.67		0.72	0.66	
Uniform Delay, d1	16.0	15.8			18.5	17.9	7.0	9.5		9.9	9.5	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.5	0.4			0.8	0.1	0.3	1.0		14.0	1.8	
Delay (s)	16.5	16.2			19.3	18.0	7.3	10.5		23.9	11.3	
Level of Service	B	B			B	B	A	B		C	B	
Approach Delay (s)		16.4			18.6			10.4			13.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	47.3	Sum of lost time (s)	9.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
93: Vineyard-Ray St & First

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	79	103	91	103	81	45	63	1213	84	46	779	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1829	1925	1613	1554	1636	1371	1829	3606		1829	3657	1571
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1829	1925	1613	1554	1636	1371	1829	3606		1829	3657	1571
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	81	105	93	105	83	46	64	1238	86	47	795	70
RTOR Reduction (vph)	0	0	77	0	0	40	0	3	0	0	0	29
Lane Group Flow (vph)	81	105	16	105	83	6	64	1321	0	47	795	41
Confl. Peds. (#/hr)			1			1			9			4
Parking (#/hr)				10	10	10						
Turn Type	Split		Perm	Split		Perm	Prot			Prot		Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases			4			3						2
Actuated Green, G (s)	13.5	13.5	13.5	14.1	14.1	14.1	7.2	68.7		6.7	68.2	68.2
Effective Green, g (s)	14.5	14.5	14.5	15.1	15.1	15.1	8.2	70.7		7.7	70.2	70.2
Actuated g/C Ratio	0.12	0.12	0.12	0.13	0.13	0.13	0.07	0.59		0.06	0.59	0.59
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	221	233	195	196	206	173	125	2125		117	2139	919
v/s Ratio Prot	0.04	c0.05		c0.07	0.05		0.03	c0.37		c0.03	0.22	
v/s Ratio Perm			0.01			0.00						0.03
v/c Ratio	0.37	0.45	0.08	0.54	0.40	0.03	0.51	0.62		0.40	0.37	0.04
Uniform Delay, d1	48.5	49.0	46.8	49.2	48.3	46.0	54.0	16.0		53.9	13.2	10.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.09	1.26		1.00	1.00	1.00
Incremental Delay, d2	1.0	1.4	0.2	2.8	1.3	0.1	1.3	0.5		2.3	0.5	0.1
Delay (s)	49.6	50.4	47.0	52.0	49.6	46.1	60.2	20.6		56.2	13.7	10.7
Level of Service	D	D	D	D	D	D	E	C		E	B	B
Approach Delay (s)		49.0			50.0			22.5			15.7	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM Average Control Delay	25.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
94: Kottinger-Spring & First

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	22	19	10	38	54	30	1263	18	58	832	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.98			1.00	0.92	1.00	1.00		1.00	0.99	
Flpb, ped/bikes		0.96			0.99	1.00	1.00	1.00		1.00	1.00	
Frt		0.97			1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		0.97			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1459			1602	1276	1554	1629		1554	1590	
Flt Permitted		0.80			0.96	1.00	0.25	1.00		0.09	1.00	
Satd. Flow (perm)		1203			1546	1276	403	1629		152	1590	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	62	23	20	10	39	56	31	1302	19	60	858	94
RTOR Reduction (vph)	0	8	0	0	0	49	0	0	0	0	2	0
Lane Group Flow (vph)	0	97	0	0	49	7	31	1321	0	60	950	0
Confl. Peds. (#/hr)	36		24	24		36	36		36	36		36
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		14.8			14.8	14.8	97.2	97.2		97.2	97.2	
Effective Green, g (s)		15.8			15.8	15.8	98.2	98.2		98.2	98.2	
Actuated g/C Ratio		0.13			0.13	0.13	0.82	0.82		0.82	0.82	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		158			204	168	330	1333		124	1301	
v/s Ratio Prot								c0.81			0.60	
v/s Ratio Perm		c0.08			0.03	0.01	0.08			0.39		
v/c Ratio		0.62			0.24	0.04	0.09	0.99		0.48	0.73	
Uniform Delay, d1		49.2			46.7	45.5	2.1	10.5		3.3	4.9	
Progression Factor		1.00			1.00	1.00	0.52	1.36		2.83	3.29	
Incremental Delay, d2		6.9			0.6	0.1	0.1	5.6		12.3	3.5	
Delay (s)		56.2			47.3	45.6	1.2	19.8		21.6	19.7	
Level of Service		E			D	D	A	B		C	B	
Approach Delay (s)		56.2			46.4			19.4			19.8	
Approach LOS		E			D			B			B	

Intersection Summary			
HCM Average Control Delay	22.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	101.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
95: Neal St & First

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	107	105	42	53	18	57	1219	42	9	760	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.98	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.96		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1529	1486		1540	1559		1554	1626		1554	1611	
Flt Permitted	0.66	1.00		0.29	1.00		0.26	1.00		0.05	1.00	
Satd. Flow (perm)	1069	1486		471	1559		423	1626		80	1611	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	71	113	111	44	56	19	60	1283	44	9	800	72
RTOR Reduction (vph)	0	31	0	0	11	0	0	1	0	0	2	0
Lane Group Flow (vph)	71	193	0	44	64	0	60	1326	0	9	870	0
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	19.9	19.9		19.9	19.9		92.1	92.1		92.1	92.1	
Effective Green, g (s)	20.9	20.9		20.9	20.9		93.1	93.1		93.1	93.1	
Actuated g/C Ratio	0.17	0.17		0.17	0.17		0.78	0.78		0.78	0.78	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	186	259		82	272		328	1262		62	1250	
v/s Ratio Prot		c0.13			0.04			c0.82			0.54	
v/s Ratio Perm	0.07			0.09			0.14			0.11		
v/c Ratio	0.38	0.74		0.54	0.24		0.18	1.05		0.15	0.70	
Uniform Delay, d1	43.8	47.0		45.1	42.7		3.5	13.5		3.4	6.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.65	1.96	
Incremental Delay, d2	1.3	11.0		6.6	0.4		1.2	39.8		3.3	2.2	
Delay (s)	45.1	58.0		51.7	43.1		4.7	53.3		8.9	15.0	
Level of Service	D	E		D	D		A	D		A	B	
Approach Delay (s)		54.9			46.3			51.2			15.0	
Approach LOS		D			D			D			B	

Intersection Summary			
HCM Average Control Delay	39.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	93.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
96: Bernal & First St

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	576	498	170	121	188	24	293	989	554	77	740	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.87	1.00	1.00		1.00	1.00	0.79	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3547	3657	1419	3547	3579		3547	1925	1291	1554	3233	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3547	3657	1419	3547	3579		3547	1925	1291	1554	3233	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	738	638	218	155	241	31	376	1268	710	99	949	276
RTOR Reduction (vph)	0	0	140	0	9	0	0	0	114	0	22	0
Lane Group Flow (vph)	738	638	79	155	263	0	376	1268	596	99	1203	0
Confl. Peds. (#/hr)			72			12			96			24
Parking (#/hr)										10	10	10
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases		4	4						2			
Actuated Green, G (s)	18.2	25.0	25.0	7.0	13.8		15.0	63.0	63.0	7.0	55.0	
Effective Green, g (s)	19.2	27.0	27.0	8.0	15.8		16.0	65.0	65.0	8.0	57.0	
Actuated g/C Ratio	0.16	0.22	0.22	0.07	0.13		0.13	0.54	0.54	0.07	0.48	
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0	5.0	4.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	568	823	319	236	471		473	1043	699	104	1536	
v/s Ratio Prot	c0.21	c0.17		c0.04	0.07		0.11	c0.66		c0.06	0.37	
v/s Ratio Perm			0.06						0.46			
v/c Ratio	1.30	0.78	0.25	0.66	0.56		0.79	1.22	0.85	0.95	0.78	
Uniform Delay, d1	50.4	43.7	38.1	54.7	48.8		50.4	27.5	23.4	55.8	26.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.73	0.54	0.26	1.00	1.00	
Incremental Delay, d2	147.3	4.6	0.4	6.4	1.4		7.0	104.0	9.9	72.5	4.1	
Delay (s)	197.7	48.3	38.6	61.1	50.3		43.9	118.8	15.9	128.3	30.4	
Level of Service	F	D	D	E	D		D	F	B	F	C	
Approach Delay (s)		116.1			54.2			75.8			37.7	
Approach LOS		F			D			E			D	

Intersection Summary			
HCM Average Control Delay	76.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
595: Vineyard & Adams

4/29/2013

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	190	25	15	150	30	35
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	209	27	16	165	33	38
Pedestrians	20			20	20	
Lane Width (ft)	13.0			13.0	13.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	2			2	2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			256		460	263
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			256		460	263
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		94	95
cM capacity (veh/h)			1285		532	748

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	236	181	71
Volume Left	0	16	33
Volume Right	27	0	38
cSH	1700	1285	630
Volume to Capacity	0.14	0.01	0.11
Queue Length 95th (ft)	0	1	10
Control Delay (s)	0.0	0.8	11.4
Lane LOS		A	B
Approach Delay (s)	0.0	0.8	11.4
Approach LOS			B

Intersection Summary			
Average Delay		2.0	
Intersection Capacity Utilization		36.0%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
597: Kottinger & Adams

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	22	60	17	10	50	12	20	40	15	9	27	12
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	27	74	21	12	62	15	25	49	19	11	33	15

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	122	89	93	59
Volume Left (vph)	27	12	25	11
Volume Right (vph)	21	15	19	15
Hadj (s)	-0.02	0.01	0.01	-0.08
Departure Headway (s)	4.3	4.4	4.5	4.4
Degree Utilization, x	0.15	0.11	0.11	0.07
Capacity (veh/h)	798	775	764	763
Control Delay (s)	8.1	7.9	8.0	7.8
Approach Delay (s)	8.1	7.9	8.0	7.8
Approach LOS	A	A	A	A

Intersection Summary			
Delay		8.0	
HCM Level of Service		A	
Intersection Capacity Utilization		27.7%	ICU Level of Service A
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis
28: Stanley Blvd & Valley

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	240	574	104	373	1396	909	186	308	230	226	250	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	0.97	0.91		0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3547	5113		3547	3657	1599	1829	3657	1599	3547	3459	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3547	5113		3547	3657	1599	1829	3657	1599	3547	3459	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	264	631	114	410	1534	999	204	338	253	248	275	156
RTOR Reduction (vph)	0	22	0	0	0	0	0	0	0	0	90	0
Lane Group Flow (vph)	264	723	0	410	1534	999	204	338	253	248	341	0
Confl. Peds. (#/hr)			12			36			36			
Turn Type	Prot			Prot		Free	Prot		Free	Prot		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						Free			Free			
Actuated Green, G (s)	7.0	34.8		15.1	42.9	100.0	10.0	18.5	100.0	10.6	19.1	
Effective Green, g (s)	8.0	38.8		16.1	46.9	100.0	11.0	21.5	100.0	11.6	22.1	
Actuated g/C Ratio	0.08	0.39		0.16	0.47	1.00	0.11	0.22	1.00	0.12	0.22	
Clearance Time (s)	4.0	7.0		4.0	7.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	284	1984		571	1715	1599	201	786	1599	411	764	
v/s Ratio Prot	c0.07	0.14		c0.12	c0.42		c0.11	0.09		0.07	0.10	
v/s Ratio Perm						c0.62			0.16			
v/c Ratio	0.93	0.36		0.72	0.89	0.62	1.01	0.43	0.16	0.60	0.45	
Uniform Delay, d1	45.7	21.8		39.8	24.3	0.0	44.5	34.0	0.0	42.0	33.7	
Progression Factor	0.82	1.31		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	33.6	0.5		4.3	7.7	1.9	67.4	0.4	0.2	2.5	0.4	
Delay (s)	71.0	29.1		44.1	31.9	1.9	111.9	34.3	0.2	44.5	34.1	
Level of Service	E	C		D	C	A	F	C	A	D	C	
Approach Delay (s)		40.0			23.4			43.4			37.9	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM Average Control Delay	31.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	80.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
30: Vineyard-Tawny & Bernal

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	170	2	35	88	26	220	23	452	10	82	763	237
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			1.00	1.00	1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.95			1.00	0.85	1.00	1.00		1.00	0.96	
Flt Protected	0.95	0.97			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1477	1419			1575	1391	1829	3645		1829	1842	
Flt Permitted	0.95	0.97			0.96	1.00	0.06	1.00		0.42	1.00	
Satd. Flow (perm)	1477	1419			1575	1391	116	3645		810	1842	
Peak-hour factor, PHF	0.87	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	195	2	41	104	31	259	27	532	12	96	898	279
RTOR Reduction (vph)	0	19	0	0	0	150	0	1	0	0	9	0
Lane Group Flow (vph)	121	98	0	0	135	109	27	543	0	96	1168	0
Confl. Peds. (#/hr)			3	3			4					4
Parking (#/hr)	10	10	10	10	10	10						
Turn Type	Split			Split		Perm	Perm			Perm		
Protected Phases	4	4		3	3			2			6	
Permitted Phases						3	2			6		
Actuated Green, G (s)	14.4	14.4			10.6	10.6	64.2	64.2		64.2	64.2	
Effective Green, g (s)	16.4	16.4			12.6	12.6	66.2	66.2		66.2	66.2	
Actuated g/C Ratio	0.16	0.16			0.12	0.12	0.64	0.64		0.64	0.64	
Clearance Time (s)	5.0	5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	232	223			190	168	74	2316		515	1170	
v/s Ratio Prot	c0.08	0.07			c0.09			0.15			c0.63	
v/s Ratio Perm						0.08	0.23			0.12		
v/c Ratio	0.52	0.44			0.71	0.65	0.36	0.23		0.19	1.00	
Uniform Delay, d1	40.3	39.8			44.0	43.7	9.0	8.1		7.9	18.9	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.1	1.4			11.8	8.3	3.0	0.1		0.2	25.7	
Delay (s)	42.4	41.1			55.9	52.0	12.1	8.2		8.0	44.6	
Level of Service	D	D			E	D	B	A		A	D	
Approach Delay (s)		41.8			53.3			8.4			41.9	
Approach LOS		D			D			A			D	

Intersection Summary			
HCM Average Control Delay	35.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	104.2	Sum of lost time (s)	9.0
Intersection Capacity Utilization	82.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
93: Vineyard-Ray St & First

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	86	86	111	184	66	58	683	68	44	1178	202
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1829	1925	1614	1554	1636	1372	1829	3589		1829	3657	1577
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1829	1925	1614	1554	1636	1372	1829	3589		1829	3657	1577
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	31	96	96	123	204	73	64	759	76	49	1309	224
RTOR Reduction (vph)	0	0	83	0	0	35	0	6	0	0	0	88
Lane Group Flow (vph)	31	96	13	123	204	38	64	829	0	49	1309	136
Confl. Peds. (#/hr)			1			1			9			4
Parking (#/hr)				10	10	10						
Turn Type	Split		Perm	Split		Perm	Prot			Prot		Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases			4			3						2
Actuated Green, G (s)	12.7	12.7	12.7	17.2	17.2	17.2	6.9	46.5		6.6	46.2	46.2
Effective Green, g (s)	13.7	13.7	13.7	18.2	18.2	18.2	7.9	48.5		7.6	48.2	48.2
Actuated g/C Ratio	0.14	0.14	0.14	0.18	0.18	0.18	0.08	0.48		0.08	0.48	0.48
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	251	264	221	283	298	250	144	1741		139	1763	760
v/s Ratio Prot	0.02	c0.05		0.08	c0.12		c0.03	0.23		0.03	c0.36	
v/s Ratio Perm			0.01			0.03						0.09
v/c Ratio	0.12	0.36	0.06	0.43	0.68	0.15	0.44	0.48		0.35	0.74	0.18
Uniform Delay, d1	37.9	39.2	37.5	36.3	38.2	34.4	44.0	17.2		43.9	20.9	14.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.29	0.83		1.45	0.44	0.51
Incremental Delay, d2	0.2	0.9	0.1	1.1	6.4	0.3	1.7	0.7		1.1	2.0	0.4
Delay (s)	38.1	40.0	37.7	37.4	44.6	34.7	58.3	15.0		64.5	11.3	7.9
Level of Service	D	D	D	D	D	C	E	B		E	B	A
Approach Delay (s)		38.7			40.6			18.1			12.4	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
94: Kottinger-Spring & First

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	13	1	19	73	75	26	736	54	79	1147	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00			1.00	0.93	1.00	0.99		1.00	0.99	
Flpb, ped/bikes		0.99			0.99	1.00	1.00	1.00		0.98	1.00	
Frt		0.99			1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected		0.99			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1584			1597	1292	1554	1606		1528	1589	
Flt Permitted		0.95			0.94	1.00	0.05	1.00		0.27	1.00	
Satd. Flow (perm)		1525			1525	1292	82	1606		442	1589	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	4	14	1	21	80	82	29	809	59	87	1260	154
RTOR Reduction (vph)	0	1	0	0	0	71	0	2	0	0	3	0
Lane Group Flow (vph)	0	18	0	0	101	11	29	866	0	87	1411	0
Confl. Peds. (#/hr)	36		24	24		36	36		36	36		36
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		12.9			12.9	12.9	79.1	79.1		79.1	79.1	
Effective Green, g (s)		13.9			13.9	13.9	80.1	80.1		80.1	80.1	
Actuated g/C Ratio		0.14			0.14	0.14	0.80	0.80		0.80	0.80	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		212			212	180	66	1286		354	1273	
v/s Ratio Prot								0.54			c0.89	
v/s Ratio Perm		0.01			c0.07	0.01	0.35			0.20		
v/c Ratio		0.09			0.48	0.06	0.44	0.67		0.25	1.11	
Uniform Delay, d1		37.5			39.7	37.4	3.1	4.3		2.5	10.0	
Progression Factor		1.00			1.00	1.00	1.48	1.75		0.31	2.14	
Incremental Delay, d2		0.2			1.7	0.1	16.2	2.3		1.2	57.9	
Delay (s)		37.7			41.4	37.5	20.7	9.8		2.0	79.3	
Level of Service		D			D	D	C	A		A	E	
Approach Delay (s)		37.7			39.7			10.2			74.8	
Approach LOS		D			D			B			E	

Intersection Summary			
HCM Average Control Delay	49.8	HCM Level of Service	D
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	88.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
95: Neal St & First

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	46	80	52	136	25	56	747	38	3	1084	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.98		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1538	1447		1536	1590		1554	1621		1550	1614	
Flt Permitted	0.43	1.00		0.52	1.00		0.10	1.00		0.28	1.00	
Satd. Flow (perm)	690	1447		848	1590		165	1621		460	1614	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	45	48	84	55	143	26	59	786	40	3	1141	89
RTOR Reduction (vph)	0	70	0	0	8	0	0	1	0	0	2	0
Lane Group Flow (vph)	45	62	0	55	161	0	59	825	0	3	1228	0
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	15.4	15.4		15.4	15.4		76.6	76.6		76.6	76.6	
Effective Green, g (s)	16.4	16.4		16.4	16.4		77.6	77.6		77.6	77.6	
Actuated g/C Ratio	0.16	0.16		0.16	0.16		0.78	0.78		0.78	0.78	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	113	237		139	261		128	1258		357	1252	
v/s Ratio Prot		0.04			c0.10			0.51			c0.76	
v/s Ratio Perm	0.07			0.06			0.36			0.01		
v/c Ratio	0.40	0.26		0.40	0.62		0.46	0.66		0.01	0.98	
Uniform Delay, d1	37.4	36.5		37.4	38.9		3.9	5.1		2.5	10.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.89	1.56	
Incremental Delay, d2	2.3	0.6		1.9	4.3		11.5	2.7		0.0	4.4	
Delay (s)	39.7	37.1		39.2	43.1		15.4	7.8		2.3	20.9	
Level of Service	D	D		D	D		B	A		A	C	
Approach Delay (s)		37.8			42.2			8.3			20.8	
Approach LOS		D			D			A			C	

Intersection Summary			
HCM Average Control Delay	19.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	85.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
96: Bernal & First St

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	179	233	209	455	714	62	174	777	127	19	947	206
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.89	1.00	1.00		1.00	1.00	0.82	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3547	3657	1452	3547	3604		3547	1925	1345	1554	3267	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3547	3657	1452	3547	3604		3547	1925	1345	1554	3267	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	197	256	230	500	785	68	191	854	140	21	1041	226
RTOR Reduction (vph)	0	0	129	0	7	0	0	0	60	0	18	0
Lane Group Flow (vph)	197	256	101	500	846	0	191	854	80	21	1249	0
Confl. Peds. (#/hr)			72			12			96			24
Parking (#/hr)										10	10	10
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases		4	4						2			
Actuated Green, G (s)	7.0	14.9	14.9	17.6	25.5		7.0	46.7	46.7	2.8	42.5	
Effective Green, g (s)	8.0	16.9	16.9	18.6	27.5		8.0	48.7	48.7	3.8	44.5	
Actuated g/C Ratio	0.08	0.17	0.17	0.19	0.28		0.08	0.49	0.49	0.04	0.44	
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0	5.0	4.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	284	618	245	660	991		284	937	655	59	1454	
v/s Ratio Prot	c0.06	0.07		0.14	c0.23		c0.05	c0.44		0.01	0.38	
v/s Ratio Perm			0.07						0.06			
v/c Ratio	0.69	0.41	0.41	0.76	0.85		0.67	0.91	0.12	0.36	0.86	
Uniform Delay, d1	44.8	37.1	37.1	38.6	34.3		44.7	23.7	14.0	46.9	24.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.13	0.64	0.37	1.00	1.00	
Incremental Delay, d2	7.1	0.5	1.1	5.0	7.3		5.8	13.9	0.4	3.7	6.8	
Delay (s)	52.0	37.6	38.3	43.5	41.6		56.4	29.1	5.5	50.6	31.7	
Level of Service	D	D	D	D	D		E	C	A	D	C	
Approach Delay (s)		42.0			42.3			30.7			32.0	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	36.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	87.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
595: Vineyard & Adams

4/29/2013

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	116	95	30	120	107	96
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.64	0.64	0.64	0.64	0.64	0.64
Hourly flow rate (vph)	181	148	47	188	167	150
Pedestrians	20			20	20	
Lane Width (ft)	13.0			13.0	13.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	2			2	2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			350		577	295
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			350		577	295
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		62	79
cM capacity (veh/h)			1187		443	717

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	330	234	317
Volume Left	0	47	167
Volume Right	148	0	150
cSH	1700	1187	541
Volume to Capacity	0.19	0.04	0.59
Queue Length 95th (ft)	0	3	94
Control Delay (s)	0.0	1.9	20.6
Lane LOS		A	C
Approach Delay (s)	0.0	1.9	20.6
Approach LOS			C

Intersection Summary			
Average Delay		7.9	
Intersection Capacity Utilization		44.0%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
597: Kottinger & Adams

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	91	37	20	25	98	90	25	60	20	15	70	35
Peak Hour Factor	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Hourly flow rate (vph)	152	62	33	42	163	150	42	100	33	25	117	58

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	247	355	175	200
Volume Left (vph)	152	42	42	25
Volume Right (vph)	33	150	33	58
Hadj (s)	0.08	-0.17	-0.03	-0.12
Departure Headway (s)	5.7	5.3	5.9	5.8
Degree Utilization, x	0.39	0.52	0.29	0.32
Capacity (veh/h)	581	638	532	551
Control Delay (s)	12.3	14.0	11.3	11.6
Approach Delay (s)	12.3	14.0	11.3	11.6
Approach LOS	B	B	B	B

Intersection Summary			
Delay		12.6	
HCM Level of Service		B	
Intersection Capacity Utilization		45.7%	ICU Level of Service A
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis
28: Stanley Blvd & Valley

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	160	1225	143	255	742	363	140	346	645	666	706	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	0.97	0.91		0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3547	5156		3547	3657	1599	1829	3657	1599	3547	3551	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3547	5156		3547	3657	1599	1829	3657	1599	3547	3551	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	170	1303	152	271	789	386	149	368	686	709	751	180
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	17	0
Lane Group Flow (vph)	170	1443	0	271	789	386	149	368	686	709	914	0
Confl. Peds. (#/hr)			12			36			36			
Turn Type	Prot			Prot		Free	Prot		Free	Prot		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						Free			Free			
Actuated Green, G (s)	8.8	35.3		11.7	38.2	120.0	12.9	16.3	120.0	35.7	39.1	
Effective Green, g (s)	9.8	39.3		12.7	42.2	120.0	13.9	19.3	120.0	36.7	42.1	
Actuated g/C Ratio	0.08	0.33		0.11	0.35	1.00	0.12	0.16	1.00	0.31	0.35	
Clearance Time (s)	4.0	7.0		4.0	7.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	290	1689		375	1286	1599	212	588	1599	1085	1246	
v/s Ratio Prot	0.05	c0.28		c0.08	0.22		c0.08	c0.10		0.20	c0.26	
v/s Ratio Perm						0.24			c0.43			
v/c Ratio	0.59	0.85		0.72	0.61	0.24	0.70	0.63	0.43	0.65	0.73	
Uniform Delay, d1	53.1	37.7		51.9	32.2	0.0	51.1	47.0	0.0	36.1	34.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.80	0.78	
Incremental Delay, d2	3.0	5.7		6.7	0.9	0.4	10.1	2.1	0.8	2.8	2.1	
Delay (s)	56.2	43.4		58.7	33.0	0.4	61.1	49.1	0.8	31.6	28.6	
Level of Service	E	D		E	C	A	E	D	A	C	C	
Approach Delay (s)		44.8			29.1			23.1			29.9	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	32.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
30: Vineyard-Tawny & Bernal

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	93	49	13	31	30	76	36	1015	93	112	399	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	1.00	
Frpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.97			1.00	0.85	1.00	0.99		1.00	0.96	
Flt Protected	0.95	0.99			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1477	1496			1596	1391	1825	3611		1829	1825	
Flt Permitted	0.95	0.99			0.98	1.00	0.26	1.00		0.18	1.00	
Satd. Flow (perm)	1477	1496			1596	1391	503	3611		342	1825	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	97	51	14	32	31	79	38	1057	97	117	416	176
RTOR Reduction (vph)	0	11	0	0	0	68	0	9	0	0	20	0
Lane Group Flow (vph)	81	70	0	0	63	11	38	1145	0	117	572	0
Confl. Peds. (#/hr)			3	3			4					4
Parking (#/hr)	10	10	10	10	10	10						
Turn Type	Split			Split		Perm	Perm			Perm		
Protected Phases	4	4		3	3			2			6	
Permitted Phases						3	2			6		
Actuated Green, G (s)	7.5	7.5			4.3	4.3	20.5	20.5		20.5	20.5	
Effective Green, g (s)	9.5	9.5			6.3	6.3	22.5	22.5		22.5	22.5	
Actuated g/C Ratio	0.20	0.20			0.13	0.13	0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	297	300			213	185	239	1718		163	868	
v/s Ratio Prot	c0.05	0.05			c0.04			0.32			0.31	
v/s Ratio Perm						0.01	0.08			c0.34		
v/c Ratio	0.27	0.23			0.30	0.06	0.16	0.67		0.72	0.66	
Uniform Delay, d1	16.0	15.8			18.5	17.9	7.0	9.5		9.9	9.5	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.5	0.4			0.8	0.1	0.3	1.0		14.0	1.8	
Delay (s)	16.5	16.2			19.3	18.0	7.3	10.5		23.9	11.3	
Level of Service	B	B			B	B	A	B		C	B	
Approach Delay (s)		16.4			18.6			10.4			13.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	47.3	Sum of lost time (s)	9.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
93: Vineyard-Ray St & First

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	79	105	91	106	83	46	63	1214	87	47	780	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1829	1925	1613	1554	1636	1371	1829	3605		1829	3657	1571
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1829	1925	1613	1554	1636	1371	1829	3605		1829	3657	1571
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	81	107	93	108	85	47	64	1239	89	48	796	70
RTOR Reduction (vph)	0	0	76	0	0	41	0	3	0	0	0	29
Lane Group Flow (vph)	81	107	17	108	85	6	64	1325	0	48	796	41
Confl. Peds. (#/hr)			1			1			9			4
Parking (#/hr)				10	10	10						
Turn Type	Split		Perm	Split		Perm	Prot			Prot		Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases			4			3						2
Actuated Green, G (s)	13.5	13.5	13.5	14.2	14.2	14.2	7.2	68.6		6.7	68.1	68.1
Effective Green, g (s)	14.5	14.5	14.5	15.2	15.2	15.2	8.2	70.6		7.7	70.1	70.1
Actuated g/C Ratio	0.12	0.12	0.12	0.13	0.13	0.13	0.07	0.59		0.06	0.58	0.58
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	221	233	195	197	207	174	125	2121		117	2136	918
v/s Ratio Prot	0.04	c0.06		c0.07	0.05		0.03	c0.37		c0.03	0.22	
v/s Ratio Perm			0.01			0.00						0.03
v/c Ratio	0.37	0.46	0.08	0.55	0.41	0.03	0.51	0.62		0.41	0.37	0.04
Uniform Delay, d1	48.5	49.1	46.9	49.2	48.3	46.0	54.0	16.1		54.0	13.3	10.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.26		1.00	1.00	1.00
Incremental Delay, d2	1.0	1.4	0.2	3.1	1.3	0.1	1.2	0.5		2.3	0.5	0.1
Delay (s)	49.6	50.5	47.0	52.3	49.6	46.0	60.6	20.7		56.3	13.8	10.7
Level of Service	D	D	D	D	D	D	E	C		E	B	B
Approach Delay (s)		49.1			50.1			22.6			15.8	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM Average Control Delay	25.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
94: Kottinger-Spring & First

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	61	25	19	13	41	55	30	1265	21	59	834	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.98			1.00	0.92	1.00	1.00		1.00	0.99	
Flpb, ped/bikes		0.96			0.99	1.00	1.00	1.00		1.00	1.00	
Frt		0.98			1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		0.97			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1465			1597	1276	1554	1628		1554	1590	
Flt Permitted		0.80			0.94	1.00	0.24	1.00		0.09	1.00	
Satd. Flow (perm)		1207			1523	1276	399	1628		144	1590	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	63	26	20	13	42	57	31	1304	22	61	860	95
RTOR Reduction (vph)	0	8	0	0	0	49	0	0	0	0	2	0
Lane Group Flow (vph)	0	101	0	0	55	8	31	1326	0	61	953	0
Confl. Peds. (#/hr)	36		24	24		36	36		36	36		36
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		15.1			15.1	15.1	96.9	96.9		96.9	96.9	
Effective Green, g (s)		16.1			16.1	16.1	97.9	97.9		97.9	97.9	
Actuated g/C Ratio		0.13			0.13	0.13	0.82	0.82		0.82	0.82	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		162			204	171	326	1328		117	1297	
v/s Ratio Prot								c0.81			0.60	
v/s Ratio Perm		c0.08			0.04	0.01	0.08			0.42		
v/c Ratio		0.62			0.27	0.04	0.10	1.00		0.52	0.73	
Uniform Delay, d1		49.1			46.7	45.3	2.2	11.0		3.5	5.1	
Progression Factor		1.00			1.00	1.00	0.52	1.36		2.80	3.23	
Incremental Delay, d2		7.3			0.7	0.1	0.1	7.0		15.0	3.6	
Delay (s)		56.4			47.4	45.4	1.2	21.9		24.9	20.0	
Level of Service		E			D	D	A	C		C	B	
Approach Delay (s)		56.4			46.4			21.5			20.3	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM Average Control Delay	23.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	101.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
95: Neal St & First

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	107	105	42	53	18	57	1224	42	9	765	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.98	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.96		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1529	1486		1540	1559		1554	1626		1554	1611	
Flt Permitted	0.66	1.00		0.29	1.00		0.26	1.00		0.05	1.00	
Satd. Flow (perm)	1069	1486		471	1559		419	1626		75	1611	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	71	113	111	44	56	19	60	1288	44	9	805	72
RTOR Reduction (vph)	0	31	0	0	11	0	0	1	0	0	2	0
Lane Group Flow (vph)	71	193	0	44	64	0	60	1331	0	9	875	0
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	19.9	19.9		19.9	19.9		92.1	92.1		92.1	92.1	
Effective Green, g (s)	20.9	20.9		20.9	20.9		93.1	93.1		93.1	93.1	
Actuated g/C Ratio	0.17	0.17		0.17	0.17		0.78	0.78		0.78	0.78	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	186	259		82	272		325	1262		58	1250	
v/s Ratio Prot		c0.13			0.04			c0.82			0.54	
v/s Ratio Perm	0.07			0.09			0.14			0.12		
v/c Ratio	0.38	0.74		0.54	0.24		0.18	1.05		0.16	0.70	
Uniform Delay, d1	43.8	47.0		45.1	42.7		3.5	13.5		3.4	6.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.64	1.95	
Incremental Delay, d2	1.3	11.0		6.6	0.4		1.2	41.1		3.8	2.2	
Delay (s)	45.1	58.0		51.7	43.1		4.8	54.6		9.5	15.1	
Level of Service	D	E		D	D		A	D		A	B	
Approach Delay (s)		54.9			46.3			52.4			15.1	
Approach LOS		D			D			D			B	

Intersection Summary			
HCM Average Control Delay	40.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	93.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
96: Bernal & First St

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	578	498	170	121	188	24	293	992	554	77	743	217
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.87	1.00	1.00		1.00	1.00	0.79	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3547	3657	1419	3547	3579		3547	1925	1291	1554	3232	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3547	3657	1419	3547	3579		3547	1925	1291	1554	3232	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	741	638	218	155	241	31	376	1272	710	99	953	278
RTOR Reduction (vph)	0	0	140	0	9	0	0	0	114	0	22	0
Lane Group Flow (vph)	741	638	79	155	263	0	376	1272	596	99	1209	0
Confl. Peds. (#/hr)			72			12			96			24
Parking (#/hr)										10	10	10
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases		4	4						2			
Actuated Green, G (s)	18.2	25.0	25.0	7.0	13.8		15.0	63.0	63.0	7.0	55.0	
Effective Green, g (s)	19.2	27.0	27.0	8.0	15.8		16.0	65.0	65.0	8.0	57.0	
Actuated g/C Ratio	0.16	0.22	0.22	0.07	0.13		0.13	0.54	0.54	0.07	0.48	
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0	5.0	4.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	568	823	319	236	471		473	1043	699	104	1535	
v/s Ratio Prot	c0.21	c0.17		c0.04	0.07		0.11	c0.66		c0.06	0.37	
v/s Ratio Perm			0.06						0.46			
v/c Ratio	1.30	0.78	0.25	0.66	0.56		0.79	1.22	0.85	0.95	0.79	
Uniform Delay, d1	50.4	43.7	38.1	54.7	48.8		50.4	27.5	23.4	55.8	26.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.73	0.54	0.25	1.00	1.00	
Incremental Delay, d2	149.5	4.6	0.4	6.4	1.4		7.0	105.7	9.9	72.5	4.2	
Delay (s)	199.9	48.3	38.6	61.1	50.3		43.9	120.5	15.9	128.3	30.6	
Level of Service	F	D	D	E	D		D	F	B	F	C	
Approach Delay (s)		117.3			54.2			76.8			37.9	
Approach LOS		F			D			E			D	

Intersection Summary			
HCM Average Control Delay	77.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	94.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
595: Vineyard & Adams

4/29/2013

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	191	25	16	151	30	36
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	210	27	18	166	33	40
Pedestrians	20			20	20	
Lane Width (ft)	13.0			13.0	13.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	2			2	2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			257		465	264
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			257		465	264
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		94	95
cM capacity (veh/h)			1284		529	747

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	237	184	73
Volume Left	0	18	33
Volume Right	27	0	40
cSH	1700	1284	629
Volume to Capacity	0.14	0.01	0.12
Queue Length 95th (ft)	0	1	10
Control Delay (s)	0.0	0.9	11.5
Lane LOS		A	B
Approach Delay (s)	0.0	0.9	11.5
Approach LOS			B

Intersection Summary			
Average Delay		2.0	
Intersection Capacity Utilization		37.0%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
597: Kottinger & Adams

4/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	23	60	17	10	50	12	20	40	15	9	27	13
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	28	74	21	12	62	15	25	49	19	11	33	16

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	123	89	93	60
Volume Left (vph)	28	12	25	11
Volume Right (vph)	21	15	19	16
Hadj (s)	-0.02	0.01	0.01	-0.09
Departure Headway (s)	4.3	4.4	4.5	4.4
Degree Utilization, x	0.15	0.11	0.11	0.07
Capacity (veh/h)	797	774	763	764
Control Delay (s)	8.1	7.9	8.0	7.8
Approach Delay (s)	8.1	7.9	8.0	7.8
Approach LOS	A	A	A	A

Intersection Summary			
Delay		8.0	
HCM Level of Service		A	
Intersection Capacity Utilization		27.8%	ICU Level of Service A
Analysis Period (min)		15	

Appendix B

Queuing Calculations

Queuing and Blocking Report
AM Peak Hour Existing plus Approved Project Conditions-No Project

5/13/2013

Intersection: 93: Vineyard-Ray St & First

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	TR	L	T	T
Maximum Queue (ft)	25	143	65	99	294	63	41	63	72	93	1317	1154
Average Queue (ft)	9	85	51	61	184	32	18	25	30	22	959	783
95th Queue (ft)	27	165	84	120	364	73	50	66	76	100	1453	1229
Link Distance (ft)		142			1758			116	116		1303	1303
Upstream Blk Time (%)		2							0		12	1
Queuing Penalty (veh)		0							0		0	0
Storage Bay Dist (ft)	225		40	75		40	100			125		
Storage Blk Time (%)		31	11	10	45	2		0			52	7
Queuing Penalty (veh)		35	13	28	89	5		0			22	11

Intersection: 93: Vineyard-Ray St & First

Movement	SB
Directions Served	R
Maximum Queue (ft)	64
Average Queue (ft)	36
95th Queue (ft)	163
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	220
Storage Blk Time (%)	0
Queuing Penalty (veh)	0

Intersection: 94: Kottinger-Spring & First

Movement	EB	WB	WB	NB	NB	SB	SB	B788
Directions Served	LTR	LT	R	L	TR	L	TR	T
Maximum Queue (ft)	15	122	57	50	213	47	230	62
Average Queue (ft)	3	67	34	26	107	19	143	20
95th Queue (ft)	21	140	71	63	236	55	288	109
Link Distance (ft)	548	473			1064		224	116
Upstream Blk Time (%)							2	0
Queuing Penalty (veh)							19	2
Storage Bay Dist (ft)			60	60		90		
Storage Blk Time (%)		16	0	6	9		9	
Queuing Penalty (veh)		10	0	31	2		6	

Network Summary

Network wide Queuing Penalty: 275

Queuing and Blocking Report
PM Peak Hour Existing plus Approved Projects Conditions-No Project

5/14/2013

Intersection: 93: Vineyard-Ray St & First

Movement	EB	EB	EB	B371	WB	WB	WB	NB	NB	NB	B788	B788
Directions Served	L	T	R	T	L	T	R	L	T	TR	T	T
Maximum Queue (ft)	63	135	63	15	91	111	50	82	194	187	139	154
Average Queue (ft)	22	62	43	3	51	60	28	34	181	185	80	95
95th Queue (ft)	73	150	76	27	101	135	65	96	216	193	170	172
Link Distance (ft)		142		1018		1758			116	116	224	224
Upstream Blk Time (%)	0	2						0	19	26		
Queuing Penalty (veh)	0	0						0	128	172		
Storage Bay Dist (ft)	225		40		75		40	100				
Storage Blk Time (%)	0	27	5		6	13	2	0	21			
Queuing Penalty (veh)	0	34	8		8	19	4	1	15			

Intersection: 93: Vineyard-Ray St & First

Movement	SB	SB
Directions Served	L	T
Maximum Queue (ft)	36	298
Average Queue (ft)	13	189
95th Queue (ft)	50	315
Link Distance (ft)		1303
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	125	
Storage Blk Time (%)		11
Queuing Penalty (veh)		4

Intersection: 94: Kottinger-Spring & First

Movement	EB	WB	WB	NB	NB	SB	SB	B788
Directions Served	LTR	LT	R	L	TR	L	TR	T
Maximum Queue (ft)	226	62	62	46	1079	62	301	111
Average Queue (ft)	175	38	33	15	753	18	232	35
95th Queue (ft)	287	71	72	53	1292	67	363	125
Link Distance (ft)	548	473			1064		224	116
Upstream Blk Time (%)					7		9	1
Queuing Penalty (veh)					0		60	4
Storage Bay Dist (ft)			60	60		90		
Storage Blk Time (%)		5	3	0	24		16	
Queuing Penalty (veh)		2	1	4	9		4	

Network Summary

Network wide Queuing Penalty: 479

Queuing and Blocking Report
AM Peak Hour Existing plus Approved Project plus Proejct Conditions

5/13/2013

Intersection: 93: Vineyard-Ray St & First

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	TR	L	T	T
Maximum Queue (ft)	46	147	65	99	301	57	25	65	95	68	1236	1060
Average Queue (ft)	14	83	50	81	215	33	7	26	39	14	900	722
95th Queue (ft)	58	165	77	128	416	76	26	66	104	80	1497	1294
Link Distance (ft)		142			1758			116	116		1303	1303
Upstream Blk Time (%)	0	2							1		11	0
Queuing Penalty (veh)	0	0							3		0	0
Storage Bay Dist (ft)	225		40	75		40	100			125		
Storage Blk Time (%)	0	27	16	9	44	1		0			49	2
Queuing Penalty (veh)	0	31	20	25	90	5		0			21	4

Intersection: 93: Vineyard-Ray St & First

Movement	SB
Directions Served	R
Maximum Queue (ft)	102
Average Queue (ft)	32
95th Queue (ft)	162
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	220
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 94: Kottinger-Spring & First

Movement	EB	WB	WB	NB	NB	SB	SB	B788
Directions Served	LTR	LT	R	L	TR	L	TR	T
Maximum Queue (ft)	30	118	75	52	176	69	215	26
Average Queue (ft)	16	61	39	21	88	28	143	10
95th Queue (ft)	42	130	81	54	191	83	250	64
Link Distance (ft)	548	473			1064		224	116
Upstream Blk Time (%)							0	0
Queuing Penalty (veh)							6	1
Storage Bay Dist (ft)			60	60		90		
Storage Blk Time (%)		14	0	0	8	0	12	
Queuing Penalty (veh)		8	0	1	2	1	13	

Network Summary

Network wide Queuing Penalty: 230

Queuing and Blocking Report
PM Peak Hour Existing plus Approved Projects plus Project Conditions

5/14/2013

Intersection: 93: Vineyard-Ray St & First

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	B788	B788	SB
Directions Served	L	T	R	L	T	R	L	T	TR	T	T	L
Maximum Queue (ft)	76	139	63	89	97	53	66	204	197	153	171	55
Average Queue (ft)	22	81	45	47	47	26	26	187	186	93	116	25
95th Queue (ft)	77	173	78	101	106	64	72	208	205	189	206	91
Link Distance (ft)		142			1758			116	116	224	224	
Upstream Blk Time (%)	0	3					0	22	26		0	
Queuing Penalty (veh)	0	0					0	148	173		0	
Storage Bay Dist (ft)	225		40	75		40	100					125
Storage Blk Time (%)	0	32	8	3	15	1	1	24				
Queuing Penalty (veh)	0	42	14	4	22	3	8	17				

Intersection: 93: Vineyard-Ray St & First

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	261	99	51
Average Queue (ft)	162	20	10
95th Queue (ft)	285	131	89
Link Distance (ft)	1303	1303	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			220
Storage Blk Time (%)	9	0	
Queuing Penalty (veh)	4	0	

Intersection: 94: Kottinger-Spring & First

Movement	EB	WB	WB	NB	NB	SB	SB	B788
Directions Served	LTR	LT	R	L	TR	L	TR	T
Maximum Queue (ft)	273	58	33	49	1083	45	295	156
Average Queue (ft)	204	37	21	19	938	15	229	41
95th Queue (ft)	346	68	42	55	1357	57	368	154
Link Distance (ft)	548	473			1064		224	116
Upstream Blk Time (%)					14		10	2
Queuing Penalty (veh)					0		69	7
Storage Bay Dist (ft)			60	60		90		
Storage Blk Time (%)		2	0	0	25	0	14	
Queuing Penalty (veh)		1	0	0	10	0	4	

Network Summary

Network wide Queuing Penalty: 526

Queuing and Blocking Report
AM Peak Hour Buildout Conditions-No Project

5/13/2013

Intersection: 93: First & Vineyard-Ray St/Vineyard

Movement	EB	EB	EB	B371	WB	WB	WB	NB	NB	NB	B788	SB
Directions Served	L	T	R	T	L	T	R	L	T	TR	T	L
Maximum Queue (ft)	29	140	66	3	99	255	65	72	145	147	6	125
Average Queue (ft)	7	58	47	0	58	133	34	22	71	78	1	27
95th Queue (ft)	25	133	79	6	118	256	77	67	140	152	9	113
Link Distance (ft)		142		1018		1758			116	116	224	
Upstream Blk Time (%)		1						0	2	3		
Queuing Penalty (veh)		0						0	9	12		
Storage Bay Dist (ft)	225		40		75		40	100				125
Storage Blk Time (%)		21	11		3	37	2	0	4			
Queuing Penalty (veh)		24	13		7	64	6	0	2			

Intersection: 93: First & Vineyard-Ray St/Vineyard

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	1337	1347	222
Average Queue (ft)	1222	1207	53
95th Queue (ft)	1532	1549	209
Link Distance (ft)	1303	1303	
Upstream Blk Time (%)	59	57	
Queuing Penalty (veh)	0	0	
Storage Bay Dist (ft)			220
Storage Blk Time (%)	54	6	0
Queuing Penalty (veh)	24	13	0

Intersection: 94: First & Kottinger-Spring/Kottinger

Movement	EB	WB	WB	NB	NB	SB	SB	B788
Directions Served	LTR	LT	R	L	TR	L	TR	T
Maximum Queue (ft)	39	85	74	51	389	108	242	10
Average Queue (ft)	11	47	40	18	151	29	124	1
95th Queue (ft)	34	90	78	52	360	86	225	12
Link Distance (ft)	548	473			1064		224	116
Upstream Blk Time (%)							1	
Queuing Penalty (veh)							12	
Storage Bay Dist (ft)			60	60		90		
Storage Blk Time (%)		8	1	2	13	0	12	
Queuing Penalty (veh)		6	1	13	3	0	10	

Network Summary

Network wide Queuing Penalty: 219

Queuing and Blocking Report
PM Peak Hour Buildout Conditions-No Project

5/13/2013

Intersection: 93: Vineyard-Ray St & First

Movement	EB	EB	EB	B371	WB	WB	WB	NB	NB	NB	B788	B788
Directions Served	L	T	R	T	L	T	R	L	T	TR	T	T
Maximum Queue (ft)	90	145	64	19	83	104	58	85	191	201	182	192
Average Queue (ft)	43	83	46	4	43	54	30	43	184	188	108	130
95th Queue (ft)	108	192	82	34	95	117	63	102	199	205	212	213
Link Distance (ft)		142		1018		1758			116	116	224	224
Upstream Blk Time (%)	0	6						0	20	27		0
Queuing Penalty (veh)	0	0						0	137	189		1
Storage Bay Dist (ft)	225		40		75		40	100				
Storage Blk Time (%)	0	34	14		3	18	2	0	22			
Queuing Penalty (veh)	0	57	25		4	26	4	1	14			

Intersection: 93: Vineyard-Ray St & First

Movement	SB	SB	SB	SB
Directions Served	L	T	T	R
Maximum Queue (ft)	130	492	451	51
Average Queue (ft)	32	390	235	10
95th Queue (ft)	119	585	555	89
Link Distance (ft)		1303	1303	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	125			220
Storage Blk Time (%)		35	1	
Queuing Penalty (veh)		16	0	

Intersection: 94: Kottinger-Spring & First

Movement	EB	WB	WB	NB	NB	SB	SB	B788
Directions Served	LTR	LT	R	L	TR	L	TR	T
Maximum Queue (ft)	109	85	64	54	928	106	295	253
Average Queue (ft)	78	45	40	22	693	57	273	134
95th Queue (ft)	122	100	80	65	1212	120	373	312
Link Distance (ft)	548	473			1064		224	116
Upstream Blk Time (%)					5		12	7
Queuing Penalty (veh)					0		116	36
Storage Bay Dist (ft)			60	60		90		
Storage Blk Time (%)		6	4	0	20	3	15	
Queuing Penalty (veh)		3	2	0	6	25	9	

Network Summary

Network wide Queuing Penalty: 673

Queuing and Blocking Report
AM Peak Hour Buildout plus Project Conditions

5/13/2013

Intersection: 93: First & Vineyard-Ray St/Vineyard

Movement	EB	EB	EB	B371	WB	WB	WB	NB	NB	NB	B788	B788
Directions Served	L	T	R	T	L	T	R	L	T	TR	T	T
Maximum Queue (ft)	49	141	66	17	99	294	65	82	138	152	7	6
Average Queue (ft)	10	56	46	2	59	148	42	30	72	80	1	1
95th Queue (ft)	46	130	79	22	122	294	85	77	140	150	10	8
Link Distance (ft)		142		1018		1758			116	116	224	224
Upstream Blk Time (%)	0	1						0	3	3		
Queuing Penalty (veh)	0	0						0	11	13		
Storage Bay Dist (ft)	225		40		75		40	100				
Storage Blk Time (%)	0	23	13		6	36	2	0	4			
Queuing Penalty (veh)	0	26	14		14	63	7	1	2			

Intersection: 93: First & Vineyard-Ray St/Vineyard

Movement	SB	SB	SB	SB
Directions Served	L	T	T	R
Maximum Queue (ft)	148	1336	1335	226
Average Queue (ft)	36	1208	1187	63
95th Queue (ft)	131	1535	1546	221
Link Distance (ft)		1303	1303	
Upstream Blk Time (%)		57	54	
Queuing Penalty (veh)		0	0	
Storage Bay Dist (ft)	125			220
Storage Blk Time (%)		54	4	0
Queuing Penalty (veh)		24	8	0

Intersection: 94: First & Kottinger-Spring/Kottinger

Movement	EB	WB	WB	NB	NB	SB	SB	B788	B788
Directions Served	LTR	LT	R	L	TR	L	TR	T	
Maximum Queue (ft)	56	129	80	62	244	88	225	40	12
Average Queue (ft)	16	58	40	22	132	29	128	4	1
95th Queue (ft)	49	125	83	59	248	78	239	45	15
Link Distance (ft)	548	473			1064		224	116	116
Upstream Blk Time (%)							1	0	
Queuing Penalty (veh)							13	1	
Storage Bay Dist (ft)			60	60		90			
Storage Blk Time (%)		12	1	4	14	0	14		
Queuing Penalty (veh)		9	1	33	4	1	11		

Network Summary

Network wide Queuing Penalty: 256

Queuing and Blocking Report
PM Peak Hour Buildout plus Project Conditions

5/13/2013

Intersection: 93: Vineyard-Ray St & First

Movement	EB	EB	EB	B371	WB	WB	WB	NB	NB	NB	B788	B788
Directions Served	L	T	R	T	L	T	R	L	T	TR	T	T
Maximum Queue (ft)	73	171	62	51	94	122	53	98	192	187	200	200
Average Queue (ft)	35	85	46	19	53	63	27	49	183	184	96	122
95th Queue (ft)	100	200	76	120	111	147	62	114	206	192	224	224
Link Distance (ft)		142		1018		1758			116	116	224	224
Upstream Blk Time (%)	0	6						0	20	28	1	0
Queuing Penalty (veh)	0	0						0	140	191	4	0
Storage Bay Dist (ft)	225		40		75		40	100				
Storage Blk Time (%)	0	36	8		8	15	4	2	22			
Queuing Penalty (veh)	1	61	14		11	23	8	10	14			

Intersection: 93: Vineyard-Ray St & First

Movement	SB	SB	SB	SB
Directions Served	L	T	T	R
Maximum Queue (ft)	79	549	471	96
Average Queue (ft)	26	421	266	19
95th Queue (ft)	93	623	620	127
Link Distance (ft)		1303	1303	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	125			220
Storage Blk Time (%)		40	0	0
Queuing Penalty (veh)		19	0	0

Intersection: 94: Kottinger-Spring & First

Movement	EB	WB	WB	NB	NB	SB	SB	B788
Directions Served	LTR	LT	R	L	TR	L	TR	T
Maximum Queue (ft)	118	103	71	43	994	67	295	245
Average Queue (ft)	73	47	43	16	653	42	256	131
95th Queue (ft)	129	125	90	49	1237	100	365	314
Link Distance (ft)	548	473			1064		224	116
Upstream Blk Time (%)					7		12	8
Queuing Penalty (veh)					0		118	40
Storage Bay Dist (ft)			60	60		90		
Storage Blk Time (%)		9	4		19	7	15	
Queuing Penalty (veh)		5	2		6	69	9	

Network Summary

Network wide Queuing Penalty: 744

Appendix C

Collision Rate Calculations

INTERSECTION COLLISION RATE CALCULATIONS

Kottinger Drive Senior Housing Redevelopment

Intersection # 1: 1st St & Vineyard Ave-Ray St

Date of Count:

Number of Collisions: 6
Number of Injuries: 5
Number of Fatalities: 0
ADT: 22300
Start Date: July 1, 2006
End Date: June 30, 2011
Number of Years: 5

Intersection Type: Four-Legged
Control Type: Signals
Area: Urban

$$\text{collision rate} = \frac{\text{NUMBER OF COLLISIONS x 1 MILLION}}{\text{ADT x 365 DAYS PER YEAR x NUMBER OF YEARS}}$$

$$\text{collision rate} = \frac{6 \times 1{,}000{,}000}{22{,}300 \times 365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	**0.15 c/mve**	**0.0%**	**83.3%**
Statewide Average*	**0.36 c/mve**	**0.5%**	**39.5%**

ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2009 Collision Data on California State Highways, Caltrans

Intersection # 2: 1st St & Kottinger Dr-Spring St

Date of Count:

Number of Collisions: 9
Number of Injuries: 5
Number of Fatalities: 0
ADT: 19800
Start Date: July 1, 2006
End Date: June 30, 2011
Number of Years: 5

Intersection Type: Four-Legged
Control Type: Signals
Area: Urban

$$\text{collision rate} = \frac{\text{NUMBER OF COLLISIONS x 1 MILLION}}{\text{ADT x 365 DAYS PER YEAR x NUMBER OF YEARS}}$$

$$\text{collision rate} = \frac{9 \times 1{,}000{,}000}{19{,}800 \times 365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	**0.25 c/mve**	**0.0%**	**55.6%**
Statewide Average*	**0.36 c/mve**	**0.5%**	**39.5%**

ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2009 Collision Data on California State Highways, Caltrans

INTERSECTION COLLISION RATE CALCULATIONS

Kottinger Drive Senior Housing Redevelopment

Intersection # 3: 1st St & Neal St

Date of Count:

Number of Collisions: 19
Number of Injuries: 9
Number of Fatalities: 0
ADT: 20300
Start Date: July 1, 2006
End Date: June 30, 2011
Number of Years: 5

Intersection Type: Four-Legged
Control Type: Signals
Area: Urban

$$\text{collision rate} = \frac{\text{NUMBER OF COLLISIONS x 1 MILLION}}{\text{ADT x 365 DAYS PER YEAR x NUMBER OF YEARS}}$$

$$\text{collision rate} = \frac{19 \times 1{,}000{,}000}{20{,}300 \times 365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	**0.51 c/mve**	**0.0%**	**47.4%**
Statewide Average*	**0.36 c/mve**	**0.5%**	**39.5%**

ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2009 Collision Data on California State Highways, Caltrans

Intersection # 4: 1st St & Bernal Ave-Sunol Blvd

Date of Count:

Number of Collisions: 31
Number of Injuries: 10
Number of Fatalities: 0
ADT: 36000
Start Date: July 1, 2006
End Date: June 30, 2011
Number of Years: 5

Intersection Type: Four-Legged
Control Type: Signals
Area: Urban

$$\text{collision rate} = \frac{\text{NUMBER OF COLLISIONS x 1 MILLION}}{\text{ADT x 365 DAYS PER YEAR x NUMBER OF YEARS}}$$

$$\text{collision rate} = \frac{31 \times 1{,}000{,}000}{36{,}000 \times 365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	**0.47 c/mve**	**0.0%**	**32.3%**
Statewide Average*	**0.36 c/mve**	**0.5%**	**39.5%**

ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2009 Collision Data on California State Highways, Caltrans

INTERSECTION COLLISION RATE CALCULATIONS

Kottinger Drive Senior Housing Redevelopment

Intersection # 5: Vineyard Ave & Adams Way

Date of Count:

Number of Collisions: 3
Number of Injuries: 0
Number of Fatalities: 0
ADT: 4200
Start Date: July 1, 2006
End Date: June 30, 2011
Number of Years: 5

Intersection Type: Tee
Control Type: Stop & Yield Controls
Area: Urban

$$\text{collision rate} = \frac{\text{NUMBER OF COLLISIONS x 1 MILLION}}{\text{ADT x 365 DAYS PER YEAR x NUMBER OF YEARS}}$$

$$\text{collision rate} = \frac{3 \times 1{,}000{,}000}{4{,}200 \times 365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	**0.39 c/mve**	**0.0%**	**0.0%**
Statewide Average*	**0.15 c/mve**	**0.8%**	**39.7%**

ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2009 Collision Data on California State Highways, Caltrans

Intersection # 6: Kottinger Dr & Adams Way-Mirador Dr

Date of Count:

Number of Collisions: 1
Number of Injuries: 0
Number of Fatalities: 0
ADT: 2400
Start Date: July 1, 2006
End Date: June 30, 2011
Number of Years: 5

Intersection Type: Four-Legged
Control Type: 4 Way Stop
Area: Urban

$$\text{collision rate} = \frac{\text{NUMBER OF COLLISIONS x 1 MILLION}}{\text{ADT x 365 DAYS PER YEAR x NUMBER OF YEARS}}$$

$$\text{collision rate} = \frac{1 \times 1{,}000{,}000}{2{,}400 \times 365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	**0.23 c/mve**	**0.0%**	**0.0%**
Statewide Average*	**0.25 c/mve**	**0.7%**	**28.4%**

ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2009 Collision Data on California State Highways, Caltrans

INTERSECTION COLLISION RATE CALCULATIONS

Kottinger Drive Senior Housing Redevelopment

Intersection # 7: Stanley Blvd & Bernal Ave-Valley Ave

Date of Count:

Number of Collisions: 15
Number of Injuries: 6
Number of Fatalities: 0
ADT: 51100
Start Date: July 1, 2006
End Date: June 30, 2011
Number of Years: 5

Intersection Type: Four-Legged
Control Type: Signals
Area: Urban

$$\text{collision rate} = \frac{\text{NUMBER OF COLLISIONS x 1 MILLION}}{\text{ADT x 365 DAYS PER YEAR x NUMBER OF YEARS}}$$

$$\text{collision rate} = \frac{15 \times 1{,}000{,}000}{51{,}100 \times 365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	**0.16 c/mve**	**0.0%**	**40.0%**
Statewide Average*	**0.36 c/mve**	**0.5%**	**39.5%**

ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2009 Collision Data on California State Highways, Caltrans

Intersection # 8: Bernal Ave & Vineayrd Ave-Tawny Dr

Date of Count: Saturday, January 00, 1900

Number of Collisions: 8
Number of Injuries: 4
Number of Fatalities: 0
ADT: 15800
Start Date: July 1, 2006
End Date: June 30, 2011
Number of Years: 5

Intersection Type: Four-Legged
Control Type: Signals
Area: Urban

$$\text{collision rate} = \frac{\text{NUMBER OF COLLISIONS x 1 MILLION}}{\text{ADT x 365 DAYS PER YEAR x NUMBER OF YEARS}}$$

$$\text{collision rate} = \frac{8 \times 1{,}000{,}000}{15{,}800 \times 365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	**0.28 c/mve**	**0.0%**	**50.0%**
Statewide Average*	**0.36 c/mve**	**0.5%**	**39.5%**

ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2009 Collision Data on California State Highways, Caltrans